ARBORICULTURAL REPORT

5 The Hexagon
Highgate
London

16th May 2019

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Scope

The purpose of this report is to provide Arboricultural advice in relation to identifying the constraints of trees both on site and in neighbouring properties, during development works to construct and extension to the existing house. Providing advice on how the trees could be impacted and protection measures to be implemented using the guidelines and principles of BS5837:2012 for those to be retained.

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1 INTRODUCTION

1.1 Brief:

This report has been prepared at the request of Chris Dyson Architects on behalf of the site owner, to provide advice on how the trees could be detrimentally impacted by construction activities to implement the proposed layout during construction works. Identifying the constraints of the trees and providing advice on suitable tree protection measures to address this for those to be retained.

1.2 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 experience. I have experience and qualifications in arboriculture and list the details in **Appendix 1.**

1.3 Documents and information provided:

A plan of the proposed layout.

1.4 Relevant background information:

None.

1.5 Scope of this report:

This report is only concerned with an trees both on site and in third party ownership, that could be impacted by construction works to implement the proposed layout, and the measures required to provide protection for them as best prescribed in the guidance of BS5837: 2012 'trees in relation to design, demolition and construction'. Any issues regarding construction methods etc. is outside the remit of an Arborist and remedy should be sought with suitably qualified persons, for example builder, engineer etc. For the purposes of this report an Arborist / Arboriculturalist is someone who through training and experience has the knowledge to assess trees and their condition in a competent manner. Trees with a dbh of less than 75mm have not been included as per the guidance in BS5837:2012 or species considered to be shrub specimens.

2 APPRAISAL

2.1 Brief site description:

The site is a detached residential dwelling located at the end of a private road. To the front is a small flower bed with a tree that has been heavily pollarded and some shrubs. A parking space is present adjacent a raised bank of land with a Lime tree growing on the edge. To the side is a brick out building used as storage and beyond this a raised patio area. The rear garden is laid to lawn with a small patio extending out from the house. The site is surrounded by properties of a similar nature.

2.2 Condition of the tree:

The tree appears to be in a healthy condition with no signs of pests or diseases normally associated with the species. Those in third party ownership were inspected as best could be achieved from the confines of the property.

A more detailed analysis of the trees can be found in **Appendix 3**.

2.3 Suitability of trees for location and management requirements at present:

In my opinion the trees can be considered suitable for their location, with the exception of T4 if it is not managed to its current dimensions. This tree has a growth potential to make it become unsuitable for its location and could be better replicated with a new tree such as a Silver Birch. T3 could become unsuitable if the incremental growth of the main stem starts to impede on the use of the drive. Given the trees age this will not be for many years.

No management is considered necessary at this moment in time for the trees.

2.4 Potential effects of development on the trees:

To implement the planning permission being sought, although T4 could be retained I have shown it to be removed. Its juxta position to the property in relation to its growth potential is unsuitable. To provide more clearance when implementing this scheme, the removal of this tree would afford more space and a new, better quality tree could be planted to compensate after the build. A species such as Silver Birch would be more appropriate.

All of the other trees can be retained and protected, but extra care will need to be taken when working in the RPA (Root Protection Area) of T3. The main impact that will need to be addressed for this tree, is via direct damage where roots could be severed or damaged from excavation works to remove hard surfacing or install foundations. Lime trees are tolerant to root pruning and disturbance, and its feasible the roots of this tree do not extend to the area calculated for the RPA and the root growth has developed in a more parallel fashion. If this is the case than direct damage to them is less likely to occur.

To ensure every effort to take steps to ensure roots do not get damaged unnecessarily the existing hard surface will be removed using hand tools where possible, or a pneumatic head on a digger under the supervision of an arborist. All debris will be removed by hand working back across the area from the furthest point, so that the ground in the RPA is protected by the hard surface as its removed. Once the hard surfacing has been removed and the trench for the foundations needs to be opened, an initial assessment trench will be opened along the foundation line where is crosses the RPA. This trench will need to be to a depth of at least 600mm, using hand tools and under the direct supervision of a suitably qualified arborist. If roots were to be encountered under 2.5cm the supervising arborist will undertake any pruning that is needed. The roots will then be covered with a non-porous material to prevent direct concrete when installing the foundation. If roots are encountered that are larger than 2.5cm then a discussion will be had with the tree officer as to whether or not root pruning is feasible. If root pruning is not a possibility then a foundation design demonstrating how the root(s) will be worked around will be provided by the project engineer. Because there has been a building and hard surfacing already occupying this space, the proposed extension is not going to have any more detrimental impact on the tree by restricting the tree of an area where it can absorb moisture or perform gaseous exchange. The risks of direct impact on the tree can be addressed with careful work practices.

Where a patio is shown to extend from the rear of the house, it slightly encroaches into the RPA of T1. I consider it highly unlikely that significant roots will be impacted by building this using a traditional method. To determine this an assessment trench will be opened adjacent to the edge of the patio, and to the depth of the proposed base to see if root activity extends this far. This will need to be opened in accordance with the hand dig method statement provided in **Appendix 3**. Any roots encountered will be pruned clear and suitably covered to ensure no contamination from cement etc. occurs. BS5837:2012 allows provision for such hard surfaces to be accommodated in the RPA, as long as it doesn't compromise more than 20% of the total RPA. In this case it is well under.

Protective fencing will need to be placed in locations shown on the Tree Protection Plan in **Appendix 5** to prevent collision damage occurring to T3 and access into the RPA where it is not required, to prevent soil compaction or contamination. If access is required over the RPA of T3 once the hard surfacing has been removed, then suitable ground protection will be in place as outlined in the method statement in **Appendix 3**.

The other risks this development proposal presents to the tree will be via indirect actions from construction activities such as, inconsiderate material storage etc. However, this can be addressed by careful planning of work procedures and installing protection fencing, ground protection etc. as required. There is space on site for accommodating construction works and material storage on the existing drive or areas outside of the RPA.

The site manager will need to confirm the locations of material storage etc. and how this will be managed around the ground protection of the trees, demonstrating how the protective areas will be avoided for this purpose and ensuring the ground is protected always until the build is finished.

Details of ground and other protection measures are provided in the method tree protection method statement in **Appendix 3**.

In this case the potential impact of the proposal in relation to the trees to be retained is considered to be moderate, with specific measures being able to be implemented to ensure that construction pressures do not adversely affect their health or longevity.

The tree can be sufficiently protected by following the principles and measures contained within this report and those within the method statement in **Appendix 3**.

2.5 Potential effects of the tree to be retained on the development:

Leaf litter could become a problem if it causes drains or gutters to become blocked, that could impact in other ways on the building, or if left on access surfaces where they could become a slip hazard. To address this gutter guards could be installed to prevent build-up of leaf litter that could become a problem, or regular cleaning of the gutters employed. Regular clearing of falling leaves on the access route, especially in times of wet weather will address any potential slip hazards caused by this seasonal occurrence.

Shadow cast caused by the trees will be no different to what is already being experienced and is not an issue.

The conflicts normally encountered with having buildings near to trees can be addressed with scheduled maintenance.

2.6 Proposed solutions to safeguard the trees to remain during construction works:

2.6.1 Protective fencing

Protective fencing will be placed in the locations shown on the tree protection plan in **Appendix 5** prior to works commencing on site. The fencing will be retained at times. Access beyond the fence line will only be allowed with good reason and with the tree officer's permission. It is important to ensure that construction activities do not occur beyond the extents of the protective fence line.

2.6.2 Services

No details relating to service runs have been provided to me. I suspect the existing services will be connected to. Careful consideration will be required as to where service runs are to be placed to involve as little breach of the RPA as possible. If the RPA will need to be crossed by these trenches, they will be opened using hand digging / air spade. Alternatively, trenchless techniques to install the services will be used and approved by the local authority. The project architect will confirm locations, installation method and any arboricultural methodology that needs to be considered to achieve this prior to them being installed to ensure the potential impact on the trees is to a minimum.

2.6.3 Site facilities and material storage

Care will have to be taken to identify the type of materials required and the access of any machinery, vehicles or plant needed to move them, as these can cause collision damage to aerial parts of the trees as well as soil contamination or compaction. At no point will materials be stored within the RPA of the trees unless on existing hard surface with suitable protection measures in place. The site manager will provide details on this aspect of the project if felt necessary by the local authority, but as long as the RPA on soft ground is not breached then this should not present a problem.

2.6.4 Works within RPA

Where the RPA of T3 will be compromised by the footprint of the extension, it is feasible that significant roots will not be affected, for the reasons explained above. Any excavation works will be initially undertaken using hand tools with the supervising arborist present to undertake any root pruning. If roots are encountered that the supervising arborist does not consider suitable for pruning, then these will be recorded and the project engineer will design a foundation to suitably accommodate their retention.

Where the patio partially extends into the RPA of T1, it is unlikely that significant roots will be present and affected. BS5837:2012 does make provision for hard surfacing such as this to be located within the RPA, as long as it does not exceed 20% of the total area. Given the fact there is existing hard surface already in this area, , the amount of RPA crossed is a lot less than this 20% value the tree is unlikely to be impacted.

2.6.5 Site supervision

The site manager will provide a timetable of works on the site, listing all of the key stages of development, starting with the placing of protection fencing / hoarding around the trees, establishing site facilities, through to completion of the site. Arboricultural supervision will take place prior to works commencing on site to ensure protection measures are understood and implemented with a pre-commencement meeting with the site manager and other relevant personnel. Site supervision will be undertaken by a suitably qualified arborist once at the start of the project, one mid-way through and once towards the end. If this is not to the tree officer's satisfaction, then supervision visits will be on a monthly basis until the completion of the project. **Arboricultural supervision will take place at all times excavation work is required in the RPA.**

Prior to work, all key personnel connected with the site will be briefed by an arborist with regard to the importance of the tree protection and methods of ensuring that the trees are protected during the construction period. A record of all arboricultural related site meetings will be made, signed off and available for inspection by the local authority if required.

Any personnel inducted on site will be made aware of the tree protection measures and will be responsible for their own actions in maintaining them and not breaching them in any way.

2.6.6 Site completion

Once work has been completed, an arborist will inspect the trees and comment on their condition and prescribe any mitigation works required. The tree protection measures are expanded upon in **Appendix 3**.

3 CONCLUSIONS

- To implement this development the trees will not need to be worked on or removed. However, in view of practical working I have shown T4 to be removed. This is a low quality tree that can be replaced with a more suitable specimen.

- Part of the RPA of T3 will be compromised by the foundation of the new extension. Given the age, species and existing hard features surrounding this tree it is feasible that roots have not extended to a point where they are likely to be impacted by foundation installation. Any initial excavation will be opened using hand tools and supervised by an arborist and will undertake any root pruning needed. Any roots larger than 2.5cm that cannot be pruned will be worked around with a suitable foundation design.

- A small portion of the RPA of T1 will be covered by the patio area. This is unlikely to have a negative impact on this tree.

- All ground disturbance works within the RPA will be achieved, initially using hand tools and under arboricultural supervision.

- Protective fencing will be set up in the locations shown on the tree protection plan in **Appendix 5**, to stop unauthorised access into this protected space and prevent collision damage. Ground protection will be in place where access across the RPA on soft ground may be needed.

- The trees can be adequately protected from construction pressures by implementing and adhering to the protection measures provided in the method statement in **Appendix 3**.

4 OTHER CONSIDERATIONS

4.1 Trees subject to statutory controls:

I am not aware of any tree preservation orders or other restrictions relating to the trees. I suggest that the local authority is contacted to confirm this and kept updated with any proposed tree works including root pruning so as to form a good working relationship and to prevent misunderstandings or contravention of protection measures. This statement is meant for readers of this report as an advisory, to make sure they make the relevant checks so as not contravene any protection status the trees may have.

Andrew Day HND Arb
For Andrew Day Arboricultural Consultancy Ltd.

Brief qualifications and experience of Andrew Day

I hold a Higher National Diploma in Arboriculture. I have been working in the field of arboriculture for approximately 10 years, spending time as a contracting arborist undertaking all aspects of practical arboriculture both in the UK and Europe. I have also worked within local government as a tree officer working for a variety of local authorities. I have a broad experience of both the practical and theoretical aspects of arboriculture having worked within the public and private sector.

1. Qualifications:

Higher National Diploma in Arboriculture (1996)

NPTC (National Proficiency Training Council) units 20, 21 and 22

Lantra professional tree inspection certificate

2. Practical experience:

Prior to establishing my company, I worked for a private Arboriculture company for three years undertaking many practical aspects of Arboriculture. I moved on from this to become a local authority tree officer for five years, my duties included consultation on planning matters with regard to trees, advice to the general public, managing the council's tree stock and liaising with other professionals on Arboricultural related issues. I was approached by an established tree contracting and consulting company in Essex to develop and run the consultancy department as their principle consultant which I did for three years.

SITE PHOTOGRAPHS

	
Showing the two Redwood trees	Showing aerial roots in the grass
	
Showing T3 & T4	Showing roots of T3 restricted by hard surfacing

SITE SPECIFIC INFORMATION

Explanatory Notes

Tree Survey

Tree Protection Method Statement and Protection Criteria

Hand Dig Method Statement

Informatives for protection fencing

Arboricultural Considerations notice for site hut and inducted personnel

Explanatory Notes

Measurements/estimates: All dimensions are estimates unless otherwise indicated. Measurements taken with a tape or clinometer are indicated with a '*'. Less reliable estimated dimensions are indicated with a '?'.

Species: The species identification is based on visual observations and the common English name of what the tree appeared to be is listed first, with the botanical name after in brackets. In some instances, it may be difficult to quickly and accurately identify a particular tree without further detailed investigations. Where there is some doubt of the precise species of tree, it is indicate it with a '?' after the name in order to avoid delay in the production of the report. The botanical name is followed by the abbreviation sp if only the genus is known. The species listed for groups and hedges represent the main component and there may be other minor species not listed.

Height: Height is estimate height to the nearest metre.

Spread: The maximum crown spread is visually estimated to the nearest metre of the total crown spread diameter. It should be noted that the crown of some trees can be one side, however this usually indicated within the report.

Diameter: These figures relate to 1.5m above ground level and are recorded in centimetres. Estimate measurements are banded 0-10cm, 11-20, 21-30 etc. If appropriate, diameter is measure with a diameter tape. 'M' indicates trees or shrubs with multiple stems. 'AV' indicates average and is the average of two stems when dealing with twin stem trees.

Estimated Age: Age is assessed as **M** mature (last one third of life expectancy), **EM** early-mature (one third to two thirds life expectancy) and **Y** young (less than one third life expectancy).

FSB: First significant branch from ground level (direction shown on tree protection / constraints plan)

SULE: This is the estimated Safe Useful Life Expectancy of the tree. Trees can live longer than this value but can pose a risk to persons or property.

RPR: Radius of root protection area around the tree /group

RPA: Root protection area for tree or group

BS 5837 2012 - On the basis of this assessment, trees can be divided into one of the following categories:

A - Trees whose retention is most desirable; High category
B - Trees where is desirable; Moderate category
C - Trees which could be retained; Low category
U - Trees that cannot realistically be retained; Fell category

Tag	Name	Age	Diameter (mm)	Height (m)	Crown Hgt (m)	FSB Hgt (m)	Crown Spread (N S E W) (m)				Life Exp	Recommendations	Category	RPR (m)	RPA Area (m)
T1	Acer pseudoplatanus (Sycamore)	M	600	18(8)	8	8	2	3	4	4		No works required at present. Located in third party ownership.	B3	7.2	162.88
T2	Tilia X europaea (Common Lime)	M	300	18(8)	8	8	0	0	0	0		No works required at present. Has recently been pollarded.	C3	3.6	40.72
T3	Tilia X europaea (Common Lime)	M	550	18(8)	8	8	4	4	4	4		No works required at present. Located in third party ownership.	B3	6.6	136.87
T4	Metasequoia glyptostroboides (Dawn Redwood)	EM	260	8(4)	4	4	2	2	2	2		No works required at present. Has been heavily pollarded.	C3	3.12	30.59

Method Statement for Tree Protection Measures

PROJECT: 5 The Hexagon, Highgate, London

CLIENT: Chris Dyson Architects

1.1 Brief

Provide protective measures specification for trees to be retained the guidelines and principles prescribed in BS5837: 2012 'trees in relation to design, demolition and construction'.

1.2 Protective measures and Site Supervision

An important factor in providing protection for the trees during the construction works is the chronological order in which development tasks are undertaken. Before work continues on site, the following issues will be addressed and submitted to the council for approval.

- A suitably qualified arborist will be retained to oversee tree protection measures where required and liaise with the tree officer as required. The contact information of this arborist will be made available to the council tree officer prior to works starting on site.

- Any excavation work in the RPA will be initially started using hand tools, with the supervising arborist overseeing and recording any root presence.

- The foundation design for the building and hard surfaces will be suitable to address any potential influence that the trees may have on them. Location of services and details of their installation will have been provided, with any arboricultural protection measures or methodologies of working programmed in the works schedule and approved by the council.

- A pre- commencement meeting with a suitably qualified arborist will take place with the site manager and other relevant site personnel, to debrief them on the importance of the protection measures and to assist in setting up of the ground protection etc. before work commences on site.

- A schedule of arboricultural site supervision will be formulated at the pre-commencement meeting and be provided to the council by the site manager once this plan of visits has been set. It is then the responsibility of the site manager to ensure the arboricultural supervision visits are booked in and undertaken at the relevant times.

1.2.1

A pre-commencement inspection by the supervising arborist will take place to ensure the protective measures are understood and a schedule of arboricultural site monitoring is formulated at the start of the project, this will consist of a visit by a suitably qualified arborist once at the start of the project, once mid-way through and once at the end. If this is not to the council's satisfaction, then visits arboricultural visits will take place once a month for the duration of the project. Any excavation work within the RPA will have arboricultural supervision present. A log of these visits and any actions required will be available to the council on request and kept on site.

1.2.2

Protective fencing as shown in **diagram 1** or similar that demonstrates that it is fit for purpose, will be placed in the locations as shown on the tree protection plan in **Appendix 5**, prior to works commencing on site. Where scaffolding is required to be erected within the confines of the RPA, it will be set up as shown in **diagram 2**.

The informatives provided will be attached to the fencing to highlight its importance at a height of 1.5m and at 5m intervals along the line of fencing, or in locations that can demonstrate they are clearly visible to identify the purpose of the fencing in relation to the project

1.2.3

If access is required within the RPA on soft ground, ground protection will be in place, this will be installed as set out in 1.7 before access into the protected area is allowed.

The placing of tree protection measures works within the construction timescale will not be altered and it is re-emphasised that this is to take place prior to any other activities.

1.2.4

All personnel inducted on site will be made aware of the tree protection measures and will be responsible for their own actions in maintain these and ensuring that they do not cause any damage to the trees.

Diagram 1

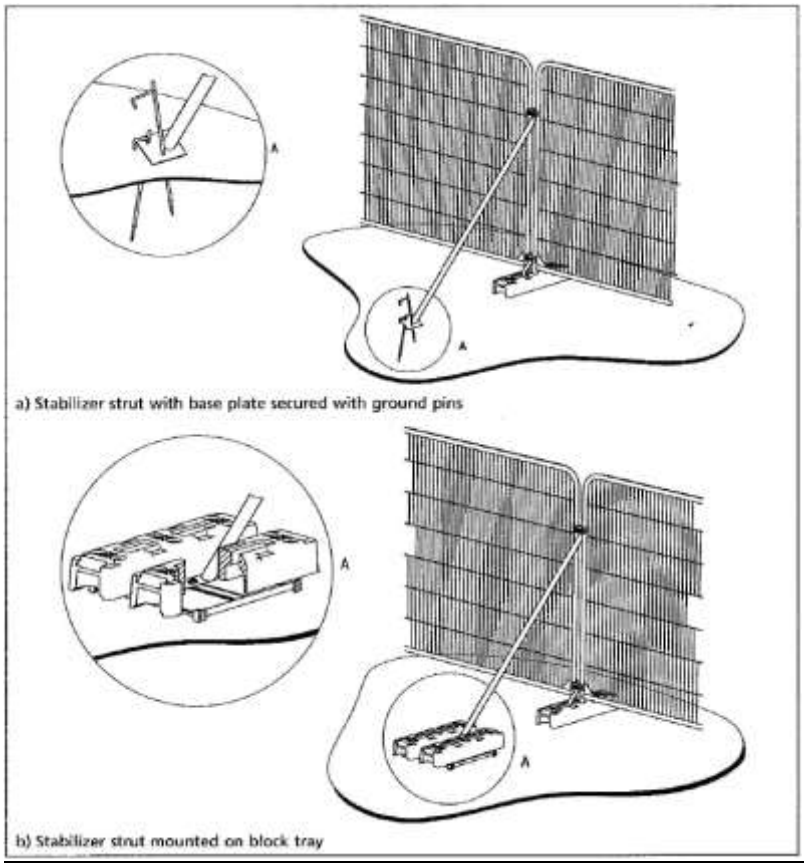
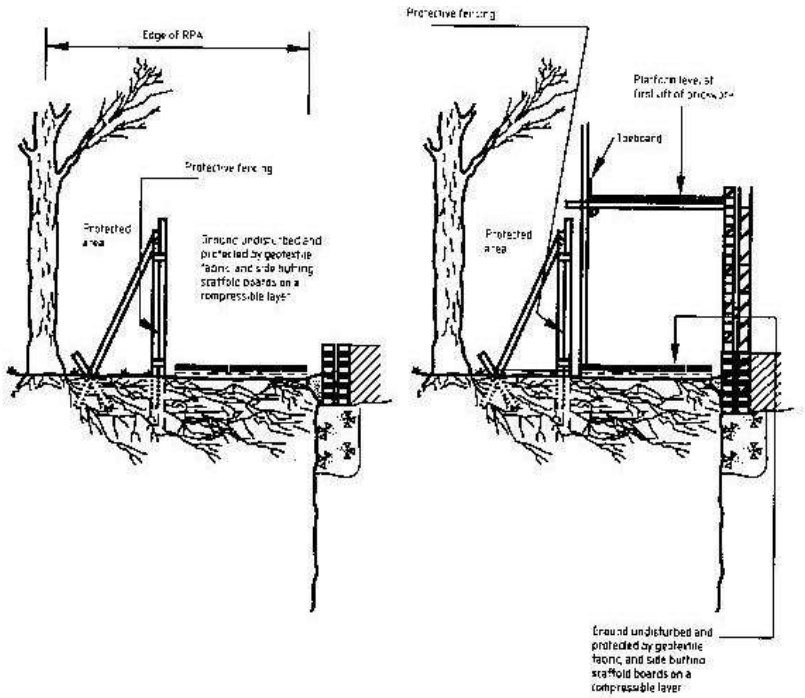


Diagram 2



1.3 Forbidden activities within RPA

1.3.1 Within the root protection area, the following activities will be prohibited, unless the local authority in writing grants specific permission:

No storage of chemicals or other substances likely to leach and cause harm to the trees to be stored.

No storage of heavy plant or materials likely to cause further soil compaction. The piling rig will sit outside the RPA at all times.

No ground disturbance works, apart from what has been approved by any planning permissions or specifically form the council.

No activities that could indirectly affect the trees such as bonfires etc.

1.3.2 No ground disturbance works apart from those granted in the planning permission is to be undertaken within the confines of the RPA without the written permission of the local authority.

The protected area is not to be breached at any time, unless the local authority has granted permission and a qualified arborist has been consulted and supervises any work activities that need to take place.

1.4 Storage of chemicals / mixing of materials

1.4.1 Storage of chemicals will be placed in a sealed bund / area, with no discharge allowed onto the ground or watercourses. The area containing these materials will have an impervious surface and stored **if possible** 10m away from the RPA. If accidental spillage of chemicals or other damage to the trees takes place the local authority is to be notified as soon as possible and a suitably qualified arborist is consulted as to the best actions to take to mitigate any damage that may have occurred as a result of the accident and these works to be undertaken to mitigate the situation as soon as possible.

1.5 Works in the RPA

1.5.1 **No excavation / ground disturbance works will take place within the RPA unless permission is granted by the local authority to do so. Where excavation works are needed in the RPA of T1 & T3, then the arboricultural hand dig method statement provided will be strictly adhered to. This includes the opening of the assessment trenches to determine if roots present a constraint and if the foundation needs to be designed around them.**

1.5.2 The foundation design for the buildings will demonstrate how it is fit for purpose to ensure that the trees will not indirectly impact on the structure, resulting in pressures to remove the trees in the future.

1.5.3 If access across the RPA is required on the soft ground, or when hard surfacing has been removed to facilitate construction, suitable ground protection will be laid down as detailed in section 1.7 below.

1.5.4 All excavation works that are required in this protected area, will have the permission from the council approved for this type of operation, and the hand dig method statement provided strictly adhered to at all times.

1.6 Material storage / site parking

1.6.1 Particular attention will be made to the type of materials to be stored and the type of machinery needed to move them, ensuring that sufficient protection measures in accordance with this method statement and space are provided to prevent damage to the trees to remain. The details outlined in 1.4 above will be adhered to.

1.6.2 If possible, material storage, deliveries, contractor parking etc. will be focused to the eastern end of the site well away from the tree.

1.6.3 **At no point will plant or materials be allowed to be parked or stored within the RPA. This will be strictly policed by the site manager**.

1.7 Ground Protection

1.7.1 Where access across the RPA is required, the following ground protection measures will be implemented as required.

For pedestrian traffic:

A single thickness of scaffold boards placed on top of a scaffold frame so as to form a suspended walkway (similar to diagram 2), or boards laid on to a geotextile membrane with a layer of wood chips 100m in thickness.

For pedestrian operated plant, up to 2 tonnes:

Interlinked ground protection boards of plywood or similar at least 2.5cm thick, laid onto a geotextile membrane on a bed of wood chip 150mm in depth.

For wheeled or tracked traffic exceeding 2 tonnes gross weight:

Metal tracking designed and fit for purpose, pre-cast concrete slabs or similar, laid to an engineering specification on a compression resistant layer e.g. wood chips that will likely spread the weight of the load and prevent compression of the soil underneath.

1.7.2 **AT NO POINT WILL THE GROUND WITHIN THE RPA BE LEFT UNPROTECTED IF ACCESS IS REQUIRED IN THIS AREA**.

1.8 Completion

1.8.1 Once all the construction activities on the site have been completed and a suitably qualified arborist will assess the condition of the trees and liaise with the local authority accordingly if any works are considered necessary.

2 HAND DIG METHOD STATEMENT

PROJECT: 5 The Hexagon, Highgate, London

2.1 The area to be excavated will be inspected by a professional arborist to assess the likely proximity of root activity and concentration prior to the commencement of any works. All relevant authorized personnel to be informed and required permissions gained before work commences.

2.2 If hand digging is not possible/practicable a method of excavation will be agreed and undertaken by a suitably qualified person for example air spading or a competent digger operator etc., in the presence of a qualified arborist.

2.3 During excavation great care will be taken to minimize damage to retained roots, including the bark around the roots.

2.4 All roots greater than 25mm diameter should be retained and worked around. Where clumps of smaller roots (including fibrous roots) are found these are to be retained.

2.5 Roots with a diameter in excess of 25mm must not be severed without permission from an Arborist.

2.6 If roots are encountered, the Arborist must conduct the root pruning and inform the relevant person to suggest mitigation works to the tree(s) if required. If severance is unavoidable roots must be cut back using a sharp tool, leaving the smallest wound possible.

2.7 If there is a possibility of infection being passed from one specimen to another, tools will be sterilized in an appropriate method to reduce the risk of cross contamination.

2.8 When backfilling an inert granular material mixed with topsoil or sharp sand (not builder's sand) is to be used around the retained roots. Unless an alternative backfill substrate has been agreed with in writing by the appropriate authorized personnel.

2.9 If roots are to be left exposed for a period of longer than 1 hour (dependent on weather conditions), then a covering of dampened Hessian or similar material is to be used to cover the exposed roots. Any changes to this practice are to be authorized by a qualified arborist.

2.10 All levels are to be returned to the original plane after any excavation, unless specific design and relevant permission has been authorized.

2.11 A qualified Arborist is to be on site to supervise during any operations within the protection zone.

ANDREW DAY
ARBORICULTURAL CONSULTANCY LTD

REDUCING COSTS BY DELIVERING PRACTICAL SOLUTIONS

TREE PROTECTION ZONE

DO NOT CROSS WITHOUT PERMISSION

BREACHING THIS BARRIER CAN RESULT IN THE FOLLOWING:

- **SHUT DOWN OF THE JOB**
- **FINANCIAL IMPLICATIONS**
- **CRIMINAL PROCEEDINGS**

ARBORICULTURAL SITE CONSIDERATIONS

THIS NOTICE IS TO BE DISPLAYED IN THE SITE OFFICE OR A SUITIBLE LOCATION WHERE IT IS CLEARLY VISIBLE AND ISSUED TO ALL PERSONNEL INDUCTED ONTO SITE

The following site considerations must be observed at all times during the development process, from site preparations through to completion.

- The protected area of the RPA must be regarded as sacrosanct and not breached except where to implement the planning permission granted, without prior consultation with either the local planning authority or the supervising arborist.
- Ground protection must not be lifted or removed without prior consultation with either the local planning authority or the supervising arborist.
- Damage caused to ground protection must be reported to the site manager to ensure suitable repair or actions are taken.
- No materials, chemicals, machinery or vehicles to be stored within the RPA (root protection area) as defined on the tree protection plan and on site by fencing and ground protection.
- No materials etc. must be rested against or machinery chained to trees.
- No pruning of trees may be undertaken by anyone other than a qualified arborist and approved by the supervising arborist and local authority tree officer.
- Any physical damage caused to a tree to be retained must be reported to the site manager immediately so that suitable remedial works can be commissioned without delay.
- Builder's sand (which contains high levels of salt) must not be used to back fill excavations within or in close proximity to tree roots, as it has a toxic effect and can cause root desiccation. Sharp sand must be used under such circumstances.
- Soil contaminants such as concrete mixings, diesel oil and vehicle washings must be kept suitably contained, preferably within bunded areas. Any spillages within 2m of a fenced area must be reported to the site manager and supervising arborist immediately so that suitable mitigation works can be commissioned.
- Fires must not be lit in positions where their flames can extend to within 5m of foliage, branches or trunks. Wind direction and size of fires will impact on this.
- Notice boards, telephone cables or other services etc. must not be attached to any part of a tree.

Remember the tree officer can turn up at any time or neighbours may report any poor practice or threats to the trees.

Site Personnel Contact Information

As far as I am aware the only personnel associated with this site at the time of writing this report is the site owner and project architect. Table 1 shows the contact details of the project architect who is to be contacted if any enquires relating to this project need answering.

Table 2

Name	Relation to Site	Contact Details
Chris Dyson Architects LLP	Project Architect	0044 20 7247 1816

LIMITATIONS AND QUALIFICATIONS

LIMITATIONS AND QUALIFICATIONS

Unless specifically mentioned the report will only be concerned with ground inspections. No below ground inspections will be carried out without prior confirmation from the client that such works should be undertaken. This report is for the purposes of identifying the potential impact construction activities could have on the trees and is not a health and safety assessment of the trees. A cursory assessment of the trees health and condition will be recorded, but this is not to be taken as a detailed assessment of its structural condition, health and management recommendations in relation to this. A separate tree inspection regime focusing on these aspects will need to be undertaken if this is required.

The validity, accuracy and findings of this report will be directly related to the accuracy of the information made available during the inspection process. No checking of independent data will be undertaken, Andrew Day will not be responsible for the recommendations within this report where essential data are not made available or are in accurate.

This report will remain valid for one year from the date of inspection but will become invalid if any tree works not recommend within the report are undertaken, soil levels around the trees are altered in any way, and extreme weather conditions are experienced or if any building works that could impact on the tree are undertaken or not disclosed.

If any of the above occurs, then it is strongly recommended that a new tree inspection is carried out.

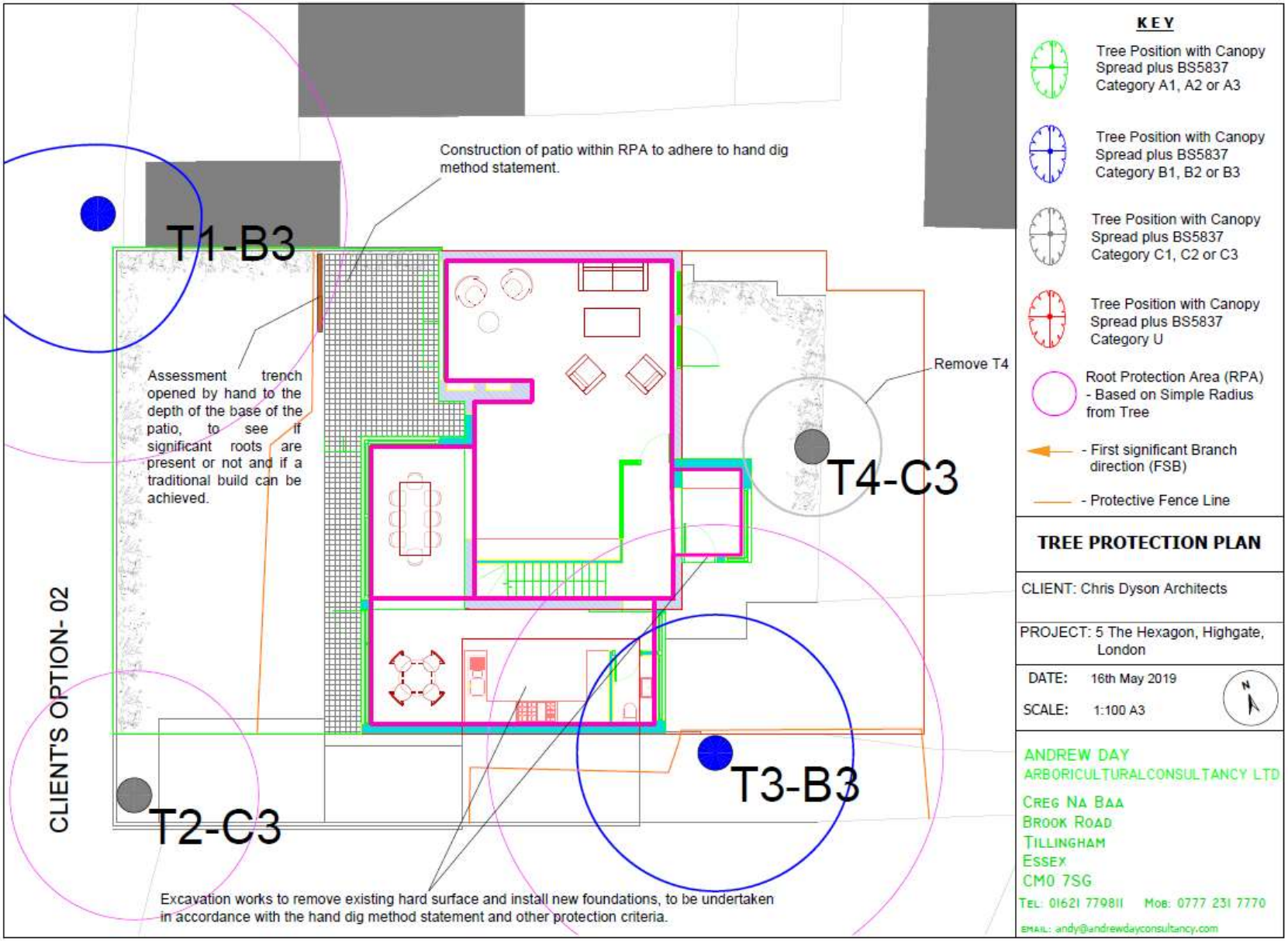
It will be appreciated, and deemed to be accepted by the client that the formulation of the recommendations for the management of the trees will be guided by the following:

1. The need to avoid reasonable foreseeable damage
2. The arboricultural considerations – Tree safety, good Arboricultural practise and aesthetics.

The client is deemed to have accepted the limitation placed on the recommendations by the sources quoted in the attached report. Where time constraints or the client limits sources, this may lead to an incomplete quantification of the risk.

TREE PROTECTION PLAN

(This plan is for reference only; please refer to the separate A3 plan for scaling if required)


Construction of patio within RPA to adhere to hand dig method statement.
T1-B3
Assessment trench opened by hand to the depth of the base of the patio, to see if significant roots are present or not and if a traditional build can be achieved.
Remove T4
T4-C3
T3-B3
T2-C3
CLIENT'S OPTION- 02
Excavation works to remove existing hard surface and install new foundations, to be undertaken in accordance with the hand dig method statement and other protection criteria.
KEY
Tree Position with Canopy Spread plus BS5837 Category A1, A2 or A3
Tree Position with Canopy Spread plus BS5837 Category B1, B2 or B3
Tree Position with Canopy Spread plus BS5837 Category C1, C2 or C3
Tree Position with Canopy Spread plus BS5837 Category U
Root Protection Area (RPA) - Based on Simple Radius from Tree
- First significant Branch direction (FSB)
- Protective Fence Line
TREE PROTECTION PLAN
CLIENT: Chris Dyson Architects
PROJECT: 5 The Hexagon, Highgate, London
DATE: 16th May 2019
SCALE: 1:100 A3
N
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