



ARBORICULTURAL REPORT

**40 Westbury Lane
Buckhurst Hill
Essex**

9th September 2020

Prepared by

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Scope

The purpose of this report is to provide Arboricultural advice in relation to identifying the constraints of trees, which are present on site and in the neighbouring garden in relation to the proposal to build an extension to the existing house. Providing advice on how the trees could be impacted and protection measures to be implemented for those to be retained, using the guidelines and principles of BS5837:2012.

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1 INTRODUCTION

1.1 Brief:

This report has been prepared at the request of Pam Merritt Design the project architect, on behalf of the site owner to provide advice on the arboricultural constraints regarding the trees located on site and in the neighbouring garden, commenting on the constraints they present to the proposal and what protection measures will need to be implemented to safeguard these trees to be retained from construction pressures.

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 showing the proposed layout of the extension.

1.4 Relevant background information:

None.

1.5 Scope of this report:

This report is only concerned with trees that I consider 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.

2 APPRAISAL

2.1 Brief site description:

The site is a detached residential property, with a hard surfaced in / out drive to the front offering off street parking. To the rear the garden is paid to lawn with trees and shrubs located towards the edges. The site is surrounded by properties of a similar nature.

2.2 Condition of trees:

The trees appear to be generally in a healthy condition with no signs of pests or diseases normally associated with the species. Those in third party ownership could only be assessed as best they could be from the confines of the site.

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

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

In my opinion the trees are fairly suitable to the site, with the exception of T3 (Yew) which is growing out of the wall adjacent and as it matures could cause displacement damage.

Please refer to the tree survey in **Appendix 3** for management options.

2.4 Potential effects of development on the trees:

To implement the planning permission being sought none of the trees will need to be removed or worked on.

The proposed extension sits outside of the constraints offered by the trees and therefore they will not be directly impacted by this proposal.

The main risk of the development proposal impacting on the trees in this case, mainly relates to potential collision damage or inappropriate storage of materials or plant. The trees can be suitably fenced off to prevent construction activities impacting on them and unauthorised access into the RPA (Root Protection Area), especially in the ear garden, where this can be fenced off to prevent access extending further than it is required. Fencing shown in **Diagram 1** in **Appendix 3** or another type that is consider suitable to prevent access extending beyond it, will need to be erected prior to demolition and construction works commencing on site to ensure the trees are not impacted either directly or indirectly. There is space on site outside of the RPA of the trees and on the existing drive to accommodate such actions. If the drive is used it will be collision damage with the canopies that will need to be prevented from occurring, with a banks person present when materials are being moved or delivered.

As long as the protection measures highlighted within this report are adhered to, then it is possible that the trees will not be detrimentally impacted by the development proposal. However, this will need to be strictly policed by the site manager as it could result in conflict with the council.

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

The trees 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. Shadow cast is unlikely to be a major issue because the owners already live with this from T1 & G1.

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

2.6 Proposed solutions to safeguard the tree 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. In this case I consider plastic mesh fencing being an acceptable barrier to be used in this domestic setting. However, if this is not acceptable with the tree officer, then heras panels as shown in **Diagram 1** in **Appendix 3** or similar that is fit for purpose. This will prevent collision damage occurring and the temptation to place or manoeuvre materials in locations where the trees could be damaged.

2.6.2 Services

No details relating to service runs have been provided to me, but I suspect the existing services to the property will be utilised. The location of service runs will be confirmed by the project architect. Where possible the service trenches will be located outside of the RPA. If this is not possible hand digging / air spade works will be used within the RPA with an arborist on site to supervise proceedings. Alternatively, trenchless techniques to install the services will be used and approved by the local authority. The location of the services will be confirmed prior to installation and the required precautionary measures taken where needed.

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 tree if possible or not on soft ground if existing hard standing is present. If not then permission by the tree officer or planning authority will be given and measures taken to ensure the tree is not affected. 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 is not breached then this should not present a problem. There is limited space on site outside of the RPA for this.

2.6.4 Works within RPA

No works are required within this protected area of trees to be retained. If this changes then the consent of the local authority will be obtained and the tree protection method statement adjusted to address this.

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 to ensure the protective fencing is set up correctly and brief the site manager on protection protocol, Once mid-way through and once towards the end of the project. Supervision will also be undertaken at key stages such as excavation in the RPA, even if outside of the scheduled visits.** If this is not to the tree officer's satisfaction, supervision visits will be on a monthly basis until the completion of the project, as well as at the key stages in the development such as works close to the RPA.

The site manager will provide the construction timetable and show the times when arboricultural supervision will be present.

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. Failure to do so could result in legal action taken against the person responsible and the site owner, including any financial remuneration involved.

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 none of the trees will need to be removed or worked on.
- No part of the RPA of trees will be compromised by the footprint of the extension.
- Protective fencing will be installed to prevent access into the protected areas where it is not required, to protect the trees from construction pressures, as well potential collision damage.
- 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 do not know if the trees are the subject of a TPO (tree preservation order) or any other restrictions such as a conservation area. This will need to be confirmed by the local council. I suggest that the local authority is kept updated with any proposed tree works 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. I am currently a consulting arborist for Andrew Day Arboriculture Ltd.

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 T1 & G1	A view of T2 & T3
	
A view of T4	Showing T5 & T6

SITE SPECIFIC INFORMATION

Explanatory Notes

Tree Survey

Tree Protection Method Statement and Protection Criteria

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 indicated 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	Height	Crown Hgt	FSB Hgt	Crown Spread (N S E W) (m)				Life Exp	Recommendations	Category	RPR	RPA
T1	Robinia pseudoacacia (Locust Tree)	M	400	12(2)	2	2.5	5.5	4.5	4.5	5	20+	This tree is in third party, so limited inspection as no access. remove deadwood from Crown.	B3	4.8	72.39
T2	Prunus padus (Bird Cherry)	M	283	7(2)	2	1	1.5	1.5	1.5	1.5	20+	No works as present.	B3	3.4	36.32
T3	Taxus baccata (Yew)	M	200	5(2)	2	0	0.5	0.5	0.5	0.5	<10	Consider removal, due to tree outgrowing the wall its planted in.	B3	2.4	18.1
T4	Sorbus aria (Whitebeam)	EM	100	5(2)	2	2	2	2	2	2	20+	No works as present.	B2	1.2	4.52
T5	Prunus avium (Wild Cherry)	M	300	7(2)	2	2.5	4	3	0	2	10+	There is a compression fork at 0.5 metres. Monitor	C3	3.6	40.72
T6	Chamaecyparis lawsoniana (Lawson Cypress)	M	283	9(2)	2	2	1	1.5	1.5	1.5	20+	Limited inspection due to ivy on main stem. Sever ivy to aid future inspection.	C2	3.4	36.32
G1	Chamaecyparis lawsoniana (Lawson Cypress)	M	200	7(2)	2	2.5	5.5	4.5	4.5	5	20+	This tree is in third party, so limited inspection as no access.	B3	2.4	18.1

Method Statement for Tree Protection Measures

PROJECT: 40 Westbury Lane, Buckhurst hill, Essex

CLIENT: Pam Merritt Design

1.1 Brief

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

1.2 Protective Fencing and Site Supervision

An important factor in providing protection for the tree 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.
- The foundation of the extension will be suitable to address any potential influence the trees may have on it. 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 protection fencing etc. before work commences on site.
- The arboricultural site supervision schedule will be compiled at the pre commencement meeting and will be the responsibility of the site manager to ensure that it is carried out and maintained for the duration of the works.

1.2.1

Protective fencing will be plastic mesh fencing, to denote the protection areas, prevent access into this protected space and stop collision damage occurring. This will also still allow the homeowner to be able to gain access to the garden space when works are not taking place. If this is not to the tree officer's satisfaction, fencing as shown in **diagram 1** or similar will be placed in the locations as shown on the tree protection plan in **Appendix 5**, prior to works commencing on site. If 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.

1.2.2

If access is required across the RPA, suitable ground protection will be installed as set out in 1.7 before access across this protected area is allowed.

Diagram 1

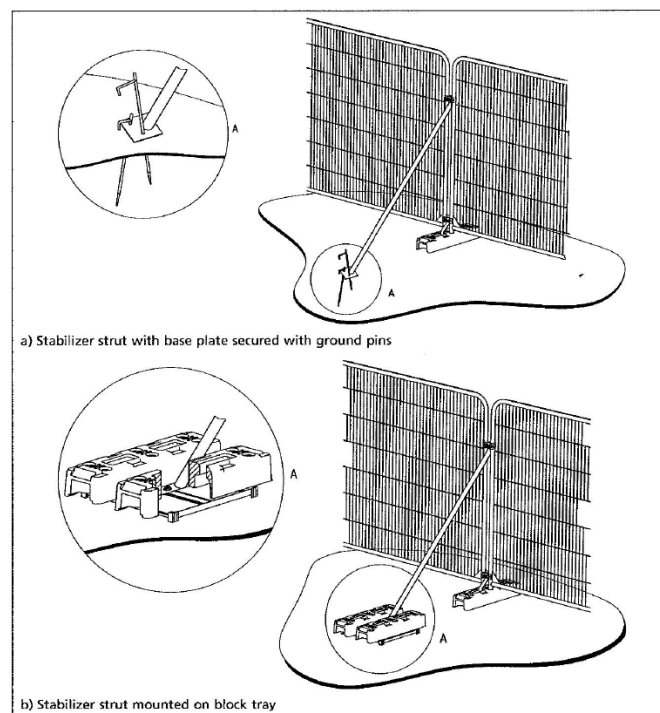
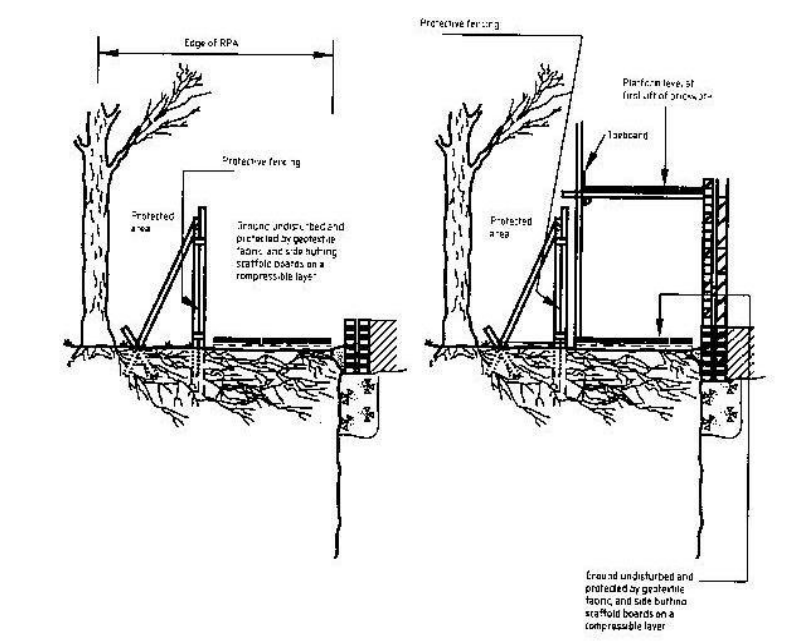


Diagram 2



1.2.3

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 beginning of the project to ensure that the protective fencing is in the correct locations and the site manager and any other relevant personnel are briefed on tree protection measures that need to be maintained, once at the start, once midway through and once toward the end. If this is not to the tree officer's satisfaction arboricultural supervision visits will be on a monthly basis, and at times when works to undertake excavations close to the RPA or other periods where the trees are more likely to be at risk of damage. A log of these visits and any actions required will be kept and made available to the council on request. **It will be the responsibility of the site manager or other named person to ensure this is maintained for the duration of the project.**

1.2.4

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.

1.2.5

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

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.

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

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

- 1.3.2 No ground disturbance work 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. If this is required, then a hand dig method statement will be provided to address the change in works.**

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 **At no point will materials be allowed to be stored in the RPA unless on existing hard surfaces and with the tree officers gives permission, or any area where the tree could be impacted. This will be strictly policed by the site manager.**

1.7 Ground Protection

1.7.1 If 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 100mm 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 of 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.

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 SUITABLE 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 1

Name	Relation to Site	Contact Details
Pam Merritt Design	Project Architect	020 8508 9862

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 constraints of trees in relation to development and 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 Arboricultural Consultancy will not be responsible for the recommendations within this report where essential data are not made available or are inaccurate.

This report will remain valid for one year from the date of inspection but will become invalid if any tree works not recommended within the report are undertaken, soil levels around the trees are altered in any way and if any building works which were not disclosed during the inspection are undertaken. If extreme weather changes occur such as heavy winds, snow etc., the trees will need to be re-inspected to ensure their condition has not been affected or has altered from the initial inspection details obtained.

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)

