ESSEXARB
TOTAL TREE SOLUTIONS

ARBORICULTURAL REPORT

89 DOWNHILL ROAD
RAYLEIGH
ESSEX

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Summary

The purpose of this report is to provide Arboricultural advice as to the current condition and future management of two semi mature trees located at the front of 89 Downhill Road, and comment on how the proposed development may affect them. This report is aimed at assessing the trees in terms of their current health and future management. This report is in accordance with BS5837 'Trees in relation to construction' 2005.

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Appendices

1 INTRODUCTION

1.1 Brief :

This report has been prepared at the request of Mr P Wislocki an architect who has an interest in developing on the site. As the two trees to the front right hand side of the property are covered by a preservation order, consideration into the design and its affects on the trees are required.

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 drawing marked P 01 to P 02
Sketch drawings illustrating various aspects of the proposed development

1.4 Relevant background information:

None

1.5 Scope of this report:

This report is only concerned with the two protected trees that are likely to be affected by the development proposal in terms of their health and future well being. Any tree or shrub not included is considered to be of little significance that has no prominent amenity value or could be replaced within a planting scheme. All observations have been made from the site or the public highway.

2 SITE VISIT AND OBSERVATIONS / COLLECTION OF DATA

2.1 Site visit:

A site visit was carried out on 27th November 2006. All my observations were from ground level, all dimensions are estimated unless otherwise indicated. The weather at the time of inspection was overcast, dry with average visibility.

2.2 Brief site description:

The site is located within the urban settlement of Rayleigh, and fronts the busy thoroughfare of Down Hall Road. The existing property is situated in an extensive plot of land with a large pond and well maintained garden area. To the front right hand side of the property, fronting onto Down Hall Road are two semi mature trees that are the subject of a preservation order.

3 APPRAISAL

Photo's to accompany these comments can be found in Appendix 2

3.1 Trees Present

At present the trees would appear to be in good health with no signs of noteworthy decay or disease. The Ash tree (T1) appears to have received prior crown reduction works, and has recovered well. The Horse Chestnut tree (T2) does not appear to have had any prior management, but due to its proximity to the adjacent power lines, may require some reduction work to provide clearance. Some cavities are present but appear to have occluded well; these should be monitored to ensure that significant decay pockets do not develop. Due to their proximity to each other it is likely that the crowns will be suppressed on one side of each tree, and will have to be managed as a pair so as not to detract from their visual prominence in the street scene. Although no signs of pests or diseases was noted at the time of inspection, it should be noted that Horse Chestnut trees are becoming susceptible to a leaf mining moth called Cameraria ohridella. The larvae of this moth affect the photosynthetic efficiency of the leaves and can result in premature leaf drop and distort its amenity value. Although no tree deaths have been solely attributed to infestation of this moth, it is reasonable to suggest that such damage to the leaf area could stress the tree and make it more susceptible to attack from pathogenic organisms.

3.2 Likely Affect To Trees By Construction

From viewing the drawing labelled P01 it shows the proposed building to be located within 2m of T1 (Ash) and T2 (Horse Chestnut) within 6m. T2 would appear to be of sufficient distance from the proposed property as to be of moderate risk of damage from construction pressures; with adequate protection any damage risk could be reduced. However, at this proximity to T1 (Ash); it is possible that roots could be affected that could have detrimental effects on the trees health and longevity. Roots deemed to be of significance to the trees health and future vitality are those of 25mm in diameter or over, or roots that form bundles but are smaller than 25mm should also be considered as significant. No detail pertaining to the foundation design has been provided, but it is assumed that excavation works are likely to be involved that could damage any roots that may be present. At this distance it will not be possible to provide protection in accordance with BS5837 2005 'Trees in relation to construction'. Currently in close proximity to the tree there is a garden path that would appear to be relatively recent in construction, and could have resulted in severance or damage to roots already. Without investigation involving careful excavation of the area likely to be disturbed during the construction process, it can only be speculated as to the extent and significance of root activity present. Although given the size and proximity of the tree it is likely that if roots have not already been cut or damaged by the path construction, then there will be significant root material present. As well as the rooting area the crown spread may also be affected and require reduction to accommodate the building. This is unlikely to be a major issue in terms of the trees health, as it would appear that reduction works to the crown have taken place in the past, and will likely be required again in accordance with good Arboricultural management. Should construction works be allowed and roots are encountered, it is suggested that a qualified arborist is consulted to provide advice and undertake any root pruning works that may be required in accordance with the method statement provided. If allowed to proceed care should also be taken in the demolition process of the existing property, and adequate protection for the trees provided.

3.5 Alternative Proposals

It would seem that the proximity of the new building to T1 (Ash) is the factor that presents the most risk of damage to the tree. If possible the manipulation of the foot print to afford the tree greater protection area would help to assist in protecting the tree from the development pressures likely to occur if the development were permitted. An alternative could be to place the parking in the area closer to the trees with the access road running along the boundary of the neighbouring property. This way a construction technique such as 'No dig' could be implemented for the parking area and take into account other factors such as permeability to allow rain fall to percolate to the rooting zone unobstructed. This is likely to have less of an affect on the trees in terms of root and crown interference, and allow the development to progress in harmony with the established trees as a feature. The increased distance from the trees could also lessen the problems that might be associated with light to dwellings or leaf litter deposit in gutters, as well as distancing the property from the neighbouring property and Down Hall Road itself. To further enhance the property and provide pleasant screening from Down Hall Road, the placement of a row of trees of native origin could be located along the front boundary. Species such as Hornbeam, Hawthorn, Field Maple and Silver Birch, would offer seasonal variety and provide a diverse habitat for local wildlife.

4 CONCLUSIONS

4.1 At present the trees would appear to be in a good state of health.

4.2 T1 (Ash) is the only specimen likely to be significantly affected by the proposed development in terms of root and crown disturbance. T2 (Horse Chestnut) is located further away and less likely to be susceptible to development pressures.

4.3 Due to the proximity of the trees in relation to the proposed wall, providing protection in accordance with BS5837 2005 would not be possible. Therefore protective measures in accordance with this guidance should be carried out as far as practically possible.

4.4 It is possible that significant roots will be present in the areas where excavation works will be required to implement the development. However, this may depend on the history relating to the garden path and its construction method. It is possible that the construction of this path could have already resulted in damage or severance to significant roots.

4.5 It may be advantageous to undertake investigations to determine if significant roots are extending into the areas that might be affected by development

4.6 If significant roots are encountered a qualified arborist should assess if they can be pruned and appointed to administer the works required. If the roots can not be cut due to the likely hood of it affecting the trees health and stability, alternative design proposals should be considered.

4.7 Alternatively the foot print for the development is revised to provide the parking area closer to the trees and the use of 'no dig' techniques implemented to reduce the likelihood of detrimental disturbance to the trees. This could also be an adventitious solution to reduce other problems associated with trees such as light and litter.

4.8 There is sufficient space for replacement specimen that could offer advantages to the street scene and the site in terms of age diversification of tree species, enhanced bio diversity and greater amenity that will assist in softening the appearance of the development.

5 OTHER CONSIDERATIONS

5.1 Trees subject to statutory controls: As these trees are covered by a tree preservation order it will be necessary to consult the local authority before any pruning works other than certain exemptions can be carried out. The works specified above are necessary for reasonable management and should be acceptable to the local authority. However, tree owners should appreciate that they may take an alternative point of view and have the option to refuse consent.

Andrew Day HND Arb
For Essex Arboriculture.

Appendix 1

Brief qualifications and experience of Andrew Day

My name is 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 Essex Arboriculture.

1. Qualifications: Higher National Diploma in Arboriculture (1996)

NPTC (National proficiency training council) units 20,21 and 22

2. Practical experience:

I worked for a private Arboriculture company for three years undertaking many practical aspects of Arboriculture. Prior to joining Essex Arboriculture I worked as a local authority tree officer for five years, my duties included consulting on planning matters with regard to trees, advice to the general public, managing the councils tree stock and liaising with other professionals on Arboricultural related issues.

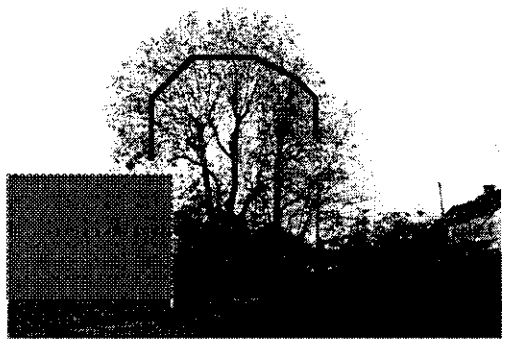
Appendix 2

SITE PHOTOGRAPHS

Looking West along Down Hall Road at T1 and T2

Looking West along Down Hall Road at T1 and T2

View of garden path at base of T1



Approximate position of proposed building to T1
And suggested crown reduction line

APPENDIX 3

Tree Survey and Explanatory notes

Tree Num.	Species	Height m	Stem diameter cm	Branch Spread M	Height of Crown clearance m	Age class	Physiological condition	Structural condition	Preliminary management recommendations	Estimated remaining contributing years	Cat grading
T1	Ash (Fraxinus Spp)		65.5	N 7.4 E 6 S 7.3 W 7	3	SM	Good	Good	N/A	80+	B
T2	Horse Chestnut (Aesculus Spp)		69	N 6.3 E 7.5 S 7.4 W5.7	2	SM	Good	Good	May need reducing back from power lines	80+	B

APPENDIX 3
Tree Survey and Explanatory notes

Explanatory Notes

- Mathematical abbreviations: > = Greater than; < = Less than.
- 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 estimate to the nearest metre from the centre of the trunk to the tips of the live lateral branches. If it is impractical to measure a crown spread area i.e in relation to a group, this will be noted as 'N/A' (not applicable).
- Diameter: These figures relate to 1.3m above ground level and are recorded in centimetres. If appropriate, diameter is measure with a diameter tape. 'M' indicates trees or shrubs with multiple stems.
- Maturity: Maturity is assessed as mature (last one third of life expectancy), maturing (one third to two thirds life expectancy) and young (less than one third life expectancy).
- Vigour: Low = low vigour and declining growth: Average = average vigour and growth; High = high vigour and strong growth.
- Estimated Age: Age is estimated from visual indicators and it should only be taken as a provisional guide. Age estimates often need to be modified based on further information such as historical records or local knowledge.
- Distance to Structures: This is estimated to the nearest metre and intended it as an indication rather than a precise measurement.
- If no work is required this will be symbolised as 'N/A'.
- Cat grading relates to the category a tree is classed as in terms of the classifications outlined in BS 5837 'Trees in relation to construction'. These are as follows:

A (Green) – Those of high quality and Value
B (Blue) – Those of moderate quality and value
C (Grey) – Those of low quality and value
R (Red) - Those in such condition any existing value would be lost within 10 years, and removed in accordance with good Arboricultural management.

APPENDIX 4
Method Statement and Root Protection Areas

PROTECTIVE FENCING METHOD STATEMENT

1 PROJECT

89 DOWNHILL ROAD, RAYLEIGH, ESSEX

1.1 BRIEF

Provide sufficient protection of trees that are to remain during construction works of the proposed boundary wall, in accordance with BS5837 ' Trees in Relation to Construction' 2005.

2 PROTECTIVE FENCING

Before work commences on site a qualified arborist shall asses with the relevant authorized personnel, the parameters for the protection zone of tree(s) where required.

2.1

A clearly presented plan showing all of the trees to be retained systematically numbered will be made prior to works and a construction exclusion zone will be formulated taking into account the trees root protection area (RPA), and other criteria set out in accordance with industry best practice BS5837.

2.2

Protective fencing shall be in accordance with industry best practice BS5837, unless agreed in writing by a relevant authorized personnel. In formatives will be placed on the fencing to reiterate the reason for its presence. See Appendix 6.

2.3

Within the exclusion zone particular attention will be paid to prohibit the following, unless specific permission is granted by the relevant authority:

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 soil compaction.

No ground disturbance works

2.4

The protected area should not be breached at anytime unless a qualified arborist has been consulted and supervises any work activities that need to take place.

APPENDIX 4
Method Statement and Root Protection Areas

2.5

Should the line of fencing need to be altered in any way or replaced then a qualified arborist should be consulted along with the relevant authorizing personnel, and the appropriate permissions gained and action taken.

Table 1.

Area of root protection required in accordance with BS5837

Tree	Root protection Area (m2)	Circle Radius (m)	Square Sides (m)
T1	194.08	7.86	13.93
T2	215.38	8.28	14.67

The results from this table are in accordance with BS 5837 'Trees In Relation To Construction' 2005, and are to be used with the method statement provided to ensure protection to the trees on site during the course of the development process.

APPENDIX 5
Tree Protection Zone Notice

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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

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89 Downhill Road, Rayleigh, Essex

APPENDIX 6
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.

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, Essex Arboriculture 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 if any building works which where not disclosed during the inspection are undertaken.

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 sources are limited by time constraints, or the client, this may lead to an incomplete quantification of the risk.

APPENDIX 7

Site Map
Proposed layout
(not to scale)