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TREE SURVEY
&
ARBORICULTURAL IMPLICATION ASSESSMENT

SITE:

57 Trinity Road
Rayleigh
Essex
SS6 8QA

23rd August 2007

For
Third Dimension Architectural & Interior Design Ltd
1st Floor
18-19 Aviation Way
Southend-On-Sea
Essex
SS2 6UN

CONTACT DETAILS

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1.0 INTRODUCTION

1.1 Hayden's is a consultancy based firm specialising in all areas related to trees and planning but providing a comprehensive Arboricultural Advisory Service for Development Companies, Local Authorities, Architects, Planners, Insurance Companies and the General Public. We have a broad experience of both the practical and theoretical aspects of arboriculture, with over 20 years of experience in both the public and private sectors.

1.2 Hayden's Arboricultural Consultants has been commissioned by Third Dimension Architectural & Interior Design Ltd to undertake an independent, detailed inspection of 1 individual tree on the site and to prepare a report on the health of and future management of the tree.

1.3 The survey was carried out by Hugh Coggles on 23rd August 2007.

1.4 Information is given on condition, age, size and indicative positioning of the trees located at 57 Trinity Road, Rayleigh, Essex, SS6 8QA. Tree surgery works deemed necessary for sound arboricultural management are given; these works are proposed to ensure the minimum possible stress to the existing trees, in the interests of sustaining as many trees in a healthy condition in the longer term.

1.5 Information is given regarding the constraints on development posed by the trees deemed worthy of retention in accordance with the recommendations contained in British Standard 5837:2005 'Tree in Relation to Construction'.

2.0 THE SITE

2.1 The site is a semi detached, ex local authority premises.

2.2 The site is bordered to the south by Trinity Road and to the east, west and north by residential dwellings. The site is largely flat with the dwellings being locally to the site and an area of brick weave hard standing in front of the property.

3.0 THE TREES

3.1 As part of this survey a single individual tree has been identified and this has been numbered T001.

3.2 T001 is a mature Sycamore located on the boundary of the above property and the adjacent dwelling to the west. The tree is clearly visible from the road and therefore does have some visual amenity. T001 does have a slight lean to the east but has no significant defects or indication s of decay that are visible from number 57 Trinity Road. In accordance with BS5837 'Trees in relation to construction' this tree has been categorised as B1.

3.3 Hayden's Arboricultural Consultants understand that the site is subject to a Tree Preservation Order. Given this, the consent of the Local Planning Authority, Rochford District Council, must be obtained prior to undertaking any of the proposed tree works.

3.4 Details of all proposed tree works are given on the attached Schedule of Trees.

4.0 IMPLICATIONS OF PROPOSED DEVELOPMENT

4.1 The proposed dwelling is largely outside the Root Protection Area (RPA) of T001 other than a minor infringement by the north west tip of the building. This infringement is so slight that it will not affect the long term health or stability of the tree. Ground guards shall be installed as shown on the attached plan to ensure that the underlying soil structure and rooting conditions are not damaged during the development process.

4.2 Some light pruning will be required on the eastern aspect of the canopy to allow the erection of scaffolding, it is also suggested that the canopy is raised to give a ground clearance of 4 metres to allow more light into the dwelling/ garden.

4.3 Given that the tree is on the north west aspect of the dwelling it is unlikely that there will be an unreasonable obstruction of sunlight or daylight to the dwelling.

4.4 The tree will require on-going maintenance to ensure that branches are kept away from the external walls, guttering, tiles etc. This will only be in the form of light pruning and will have no impact on the health or amenity value of the tree.

5.0 TREE PROTECTION

5.1 The trees to be retained will be protected by the use of stout fencing erected along the lines indicated on the attached Arboricultural Implication assessment drawing No.08.07.1608. This fencing will be constructed with weld mesh panels on a framework of scaffolding, or similarly sturdy material, driven into the ground to a suitable depth to ensure its stability and in line with BS 5837:2005, figure 2 (Appendix No 1).

5.2 Where construction adjacent to trees is within the RPA (BS 5837:2005, Table 2), specific detail will be paid to the type of surface treatment used in these areas, details of which are given in para' 12.0 below. This proposed development (footpaths) will be constructed as a final phase of the development, thereby protecting the roots of the tree throughout the major construction phase of the proposed development.

5.3 Where the construction of the proposed buildings is adjacent to or encroaches directly within the RPA, then it is proposed to construct/erect a protected area immediately around the building to safeguard the roots of the adjacent trees. This protected area will be constructed in line with Figure 3 of BS 5837:2005 (Appendix 2).

5.4 All fencing with regards to the protection of trees will be erected prior to any development on the site, therefore ensuring the maximum protection. This fencing will be regarded as sacrosanct and, once erected, will not be removed or altered without the prior consent of the Local Planning Authority Arboricultural Officer.

6.0 LOCATION OF SITE OFFICE/COMPOUND

6.1 The position of the office/compound will be agreed in writing with the Local Planning Authority prior to commencement of any permitted development works. Any re-siting of the office/compound through the various phases of development will be agreed prior to re-siting with the Arboricultural Officer.

7.0 ON SITE STORAGE OF SPOIL AND BUILDING MATERIALS

7.1 Prior to and during all construction works on site, no spoil or construction materials will be stored within the RPA of any tree on, or adjacent to the site, even if the proposed development is to be within the RPA. This is to reduce to a minimum the compaction of the roots of the trees. Details of the RPA for each tree where no spoil or building materials will be stored are indicated on the attached drawing No.08.07.1608. Any encroachment within this protected area will only be with the prior agreement of the Local Planning Authority Arboricultural Officer.

7.2 Any facilities for the storage of oils, fuels or chemicals shall be sited on impervious bases and surrounded by impervious bund walls. The volume of the bund compound shall be at least equivalent to the capacity of the tank plus 10%. If there is a multiple tankage, the compound shall be at least equivalent to the capacity of the largest tank, or the combined capacity of interconnected tanks, plus 10%. All filling points, vents, gauges and sight glasses shall be located within the bund. The drainage system of the bund shall be sealed with no discharge to any watercourse, land or underground strata. Associated pipe-work shall be located above ground and protected from accidental damage. All filling points and tank overflow pipe outlets shall be detailed to discharge downwards into the bund.

8.0 PROGRAMME OF WORKS

8.1 All tree surgery works, once approved by the Local Planning Authority, will be carried out prior to any other site works. Once completed, the proposed protective fencing will be erected along the lines indicated above. All of this will be carried out prior to commencement of any development works on the site. Outline details of the proposed programme are given in the Flow chart attached (Appendix 3). A detailed schedule of the proposed tree surgery works to be completed prior to construction work is in the attached Tree Survey.

8.2 During the construction works on site, the protective fencing will be maintained and every effort will be made to prevent unnecessary damage to the trees. The Arboricultural Officer will be notified immediately of any unforeseen damage. The necessary remedial tree surgery will be carried out at the earliest opportunity to the approval of Arboricultural Officer. The site will be inspected on a regular basis by a competent and qualified arboriculturalist.

8.3 On completion of the development works on site, it would be advisable to carry out a further tree survey to identify any remedial tree surgery necessary as a result of the development works, and to suggest details for the future management of the trees.

9.0 REMEDIAL TREE SURGERY

9.1 All necessary remedial tree work will be agreed with the Local Planning Authority and will be carried out in line with BS 3998:1989 (Recommendations for Tree Works). An arboricultural contractor approved by the Local Planning Authority will carry out the work. Any alterations to the proposed schedule of works will be agreed with the Arboricultural Officer prior to commencement of works.

10.0 LEVELS

10.1 To allow the proposed development, there may have to be some alterations in the site levels. Appropriate measures will be taken to minimise the detrimental effects on the tree(s) that are to be retained in these areas. If excavations have to be so close to the tree(s) that roots greater than 50mm diameter are likely to be encountered, particular care will be taken to avoid damage. Excavation in these areas will be undertaken by hand, avoiding any damage to the bark. The roots will be surrounded with sharp sand prior to the replacing of any soil or other material in the vicinity.

10.2 With regards to raising levels, it is necessary to maintain adequate supplies of water and oxygen through the soil to the trees' roots. Therefore, where necessary, a granular material will be used which will not inhibit gaseous diffusion e.g.; no-fines gravel or cobbles, Type 2 road-stone, and all hard surfaces will be of suitable specification to allow such gaseous diffusion, such as brick pavers.

11.0 SERVICES

11.1 It is proposed that all service runs will be placed outside the RPA of the trees on or adjacent to the site. Where it is not possible to do this, then the proposed length infringing on the RPA will be hand dug 'broken trenches' (NJUG 10 Para 4.6.1) to ensure the maximum protection of the trees' roots. Alternatively the trenches could be excavated using an 'Air spade' allowing services to pass below and through the roots without the need for excavation. All roots that need to be cut should be cut in such a way to ensure that the final wound is as small as possible and free from ragged torn ends, (see BS 3998:1989 Para 14.3). All routes for overhead services will aim to avoid the trees. Where this is unavoidable, any tree work will be agreed prior to commencement with the Arboricultural Officer.

11.2 All service providers (Statutory Authorities) will be consulted prior to commencement of works with the aim of minimising the number of service runs on the site.

11.3 All service runs/trenches will be agreed with the Local Planning Authority / Arboricultural Officer prior to commencement of works.

12.0 Hard Surface Types and Construction Beneath the Crown Spread

12.1 In a number of areas the proposed footpaths may be within the RPA(s) recommended in BS 5837:2005, Table 2. Specific detail will be paid to the design and specifications of any hard surfaces. In these areas, it is proposed that the construction of footpath will be along the lines of the Arboricultural Advisory Information Services (AAIS) Practice Note 1 "Driveways Close to Trees", the only difference being that in conjunction with the 'geo-web, the road stone will be incorporated in and retained by 'Terram' geo-web, cellular confinement system' or similar (see Appendix 4). Where it is necessary to remove the existing hard surface or lower the ground level exposing roots within the BS 5837:2005 RPA, this will be excavated by hand and the roots surrounded by sharp sand, with the greatest of care being taken to cause the minimum of damage to the root.

12.2 Where it is shown that the construction of a boundary wall or dwelling encroaches within the RPA of a tree, the foundations of the wall or dwelling will be constructed in such a manner as to minimise the detrimental affect of the construction on the tree's roots. In the majority of cases, this will mean the use of a pad and beam or pile and beam type construction allowing the roots to be bridged with the minimum of severance. In the case of pad and beam foundations, any excavations within the RPA of the tree will be hand dug to ensure minimal damage to tree roots. Obviously, should a piling rig be required to create piles, any tree work required to allow access must be undertaken prior to the commencement of works and only with prior consent of the Local Planning Authority.

12.3 Where it is proposed that the boundary fencing is to be erected below within the RPA, it is proposed that the fence posts will be secured by the use of 'Met-Posts' in order to keep the disturbance and damage of the roots of the trees to a minimum.

13.0 Reporting Procedures

13.1 The site and associated development should be monitored/inspected regularly by a competent arboriculturalist to ensure that the arboricultural aspects of the planning permission are enforced and to deal with and advise on any problems that may arise during the development process. Should any problems arise during the development; the Arboriculturalist will contact the Local Planning Authority and appropriate action taken only with the prior permission of Third Dimension Architectural & Interior Design Ltd and the Local Planning Authority.

14.0 Conclusions and Recommendations

14.1 As can be seen from the above the proposed development does not require the removal of T001. There will be a minor infringement on the RPA of approximately 1%. Given that the tree is open grown it is acceptable to offset the RPA as stated in BS5837 paragraph 5.2.4 whilst still maintaining the rooting area of 141.9 square metres.

14.2 Some light pruning works will be required to allow the erection of scaffolding. This will not affect the health or amenity value of the tree, proving that it is carried out sympathetically in accordance with BS 3998:1989 (Recommendations for tree works).

14.3 The tree surgery works proposed as part of this Survey are recommended to mitigate any identified problems that may be caused by trees in close proximity to the proposed development. To this end, should these recommendations be overruled, this Survey stands as the opinion of Hayden's Arboricultural Consultants, and therefore any damage or injury caused by trees recommended by this practice for felling or tree surgery works, to which the proposed schedule of works has been altered or the tree has been requested to be retained by the Local Planning Authority, cannot be the responsibility of this practice.

15.0 EXPLANATORY NOTES

15.1 **Categories**

15.2 Below is an explanation of the categories used in the attached Tree Survey.

No Identifies the tree on the plan.

Species Common names are given to aid understanding for the wider audience.

BS 5837 Category On the basis of this assessment, trees can be divided into one of the following categories, and can be differentiated by cross-hatching or by colour: A-trees where retention is most desirable, high category (colour green); B-trees where retention is desirable, moderate category (colour blue); C-trees which could be retained, low category (colour grey); R-trees for removal, fell category (dark red). These categories are based on health, form, safety, screening value, historical value and rarity. (BS 5837:2005).

***DBH* (mm)** Diameter of main stem in millimetres from breast height. Where the tree is a multi-stem, an average diameter is given.

Age Recorded as one of seven categories:

Y Young. Recently planted or establishing tree that could be transplanted without specialist equipment, ie up to 12-14 cms stem girth.

S/M Semi-mature. An established tree but one which has not reached its potential ultimate height and has significant growth potential.

E/M Early-mature. A tree reaching its ultimate potential height, whose growth rate is slowing down but will still increase in stem diameter and crown spread and has a safe useful life expectancy.

M Mature. A mature specimen with limited potential for any significant increase in size but with a reasonable safe useful life expectancy.

O/M Over-mature. A senescent or moribund specimen with a limited safe useful life expectancy. Possibly also containing sufficient structural defects with attendant safety and/or duty of care implications.

V Veteran

D Dead.

Height Recorded in metres, measured from the base of the tree.

Life Expectancy Relates to the prospective life expectancy of the tree and is given as 4 categories: 1 = 40 years+; 2 = 20-40 years; 3 = 10-20 years; 4 = less than 10 years.

Crown spread	Indicates the spread of the crown from the base of the tree.
Minimum distance	This is a distance equal to 12 times the diameter of the tree at 1.5 metres for single stemmed trees and 10 times the diameter of the base of the tree for multi stemmed specimens. (BS 5837:2005).
RPA	Root Protection Area, defined in BS5837:2005 as 'a layout design tool indicating the area surrounding a tree that contains sufficient rooting volume to ensure the survival of the tree, shown in plan form in square metres'. Ideally this is an area around the tree that must be kept clear of construction, level changes of construction operations. Some methods of construction can be carried out within the RPA of a retained tree but only if approved by the Local Planning Authority's tree officer.
Water Demand	This gives the water demand of the species of tree when mature, as given in the NHBC Standards Chapter 4.2 'Building Near Trees'.
Visual	Concerns the planning and landscape contribution to the development site made by the tree, hedge or tree group, in terms of its amenity value and prominence on the skyline along with functional criteria such as the screening value, shelter provision and wildlife significance.
Problems/comments	May include general comments about growth characteristic, how it is affected by other trees and any previous surgery work; also, specific problems such as deadwood, pests, diseases, broken limbs, etc.
Work required	Identifies the necessary tree work to mitigate anticipated problems and deal with existing problems identified in the previous category.
Priority	This gives a priority rating to each tree allowing the client to prioritise necessary tree works identified within the Tree Survey. **1** Urgent – works required immediately; **2** Works required within 6 months; **3** Works required within 1 year; **4** Re-inspect in 12 months, **0** Remedial works as part of implementation of planning consent.

16.0 TREE PROBLEMS

16.1 This gives a brief description of the problems identified in the attached Tree Survey.

16.2 **Deadwood:**
This relates to dead branches in the crown of the tree. In the majority of cases this is just caused by the natural ageing of the tree or its close proximity to neighbouring trees. However in some cases it may be related to fungal, bacterial or viral infection and for that reason a close eye should be kept on those trees showing signs of excessive deadwood.

17.0 LIMITATIONS AND QUALIFICATIONS

Tree inspection reports are subject to the following limitations and qualifications.

General exclusions

Unless specifically mentioned, the report will only be concerned with above ground inspections. No below ground inspections will be carried out without the 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. Hayden's Arboricultural Consultants 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 building works are carried out upon the property, soil levels altered in any way close to the property, or tree work undertaken.

If alterations to the property or soil levels are carried out, or tree work undertaken, it is strongly recommended that a new tree inspection be carried out.

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

1. The need to avoid reasonable foreseeable damage.
2. The arboricultural considerations - Tree safety, Good Arboricultural practice (tree work) and Aesthetics.

The client and their insurers are 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.

Hugh Coggles
Arboricultural Consultant
Hayden's Arboricultural Consultants

August 2007.....

SCHEDULE OF TREES (AIA) 57 Trinity Road, Rayleigh, Essex

Surveyed By: Hugh Coggles
Survey Date: 23/08/2007

Tree No.	Species	DBH Min Dist RPA (m²)	Height Base of Crown	Age Life Expect.	Crown Spread Water Demand Ground Cover	Visual	Problems / Comments	BS Cat	Work Required (AIA)	Priority
T001	Sycamore (Acer pseudoplatanus)	560 6.72 141.9	16 2.5	M 1/2	N5, E6, S5, W5 Moderate Bare Earth	Moderate, tree is visible from the road	Tree does have a slight lean towards the east. The crown is healthy with no signs of disease or decay	B1	Reduce canopy on eastern aspect to allow erection of scaffold. Raise canopy to 4m.	0

SCHEDULE OF WORKS (AIA)

57 Trinity Road, Rayleigh, Essex

Surveyed By: Hugh Coggles
Surveyed: 23/08/2007

Tree No.	Species	Work required	Priority
T001	Sycamore (Acer pseudoplatanus)	Reduce canopy on eastern aspect to allow erection of scaffold. Raise canopy to 4m.	**0**