ARBORICULTURAL IMPLICATION STUDY
AND
TREE PROTECTION STRATEGY

Palmers Lodge
40 College Crescent

Produced For: Robin Pearson
Prepared By: Michael Honey, Dip. Arb. (RFS), F.Arbor.A. BA Hons
Reference: MPH0248/RHB
Date: 10 March 2010

Prepared for: Robin Pearson

Site Address: Palmers Lodge, 40 College Crescent

Report Prepared By: Michael Honey

Date: 2010

▪ Instructions

Further to your recent instructions we have pleasure in submitting the following report.

▪ Background

The report concerns the above site which consists of a large commercial residential property set within its own grounds.

The site is subject to a development proposal which consists of a new boundary treatment consisting of a brick wall at the northern boundary and to replace a previously demolished wall, as outlined upon the proposal drawing enclosed within Appendix 2.

▪ Scope of Report

a) The following report assesses all the trees on site in terms of their health and safety, amenity value and future potential. The trees were numbered and plotted on the proposal drawing enclosed within Appendix 2. The schedule of trees is included in Appendix 1.
b) The scope of this report is to assess the development proposal for this site with respect to its impact upon existing trees. All interfaces between the development and the trees and their root zones are assessed.

c) Root Protection Areas for the trees are also listed and with reference to BS5837;2005. "Trees in Relation to Construction" Table 2 and as the radius of the Root Protection Area.
d) The quality and future growth potential of the trees likely to be affected by the development are assessed.
e) The report details those protective measures that will be necessary for the successful protection of retained trees during the construction process.
f) Guidance is given with respect to the implementation of protective procedures and measures in relation to specific site sensitive trees and general site organisation and construction logistics.
g) The use of a Tree Protection Method Statement is described as a potential tool to assist the successful logistical implementation of tree protective measures during the construction process. The general principles involved in the formation of a method statement and its contents are outlined.

▪ Site Description

The site includes a detached commercial residential property set within its own grounds. The property is located in an urban area of St John's Wood and at the transition from residential to commercial/retail land use and associated with the retail centre of Swiss Cottage. Other institutional and residential properties exist beyond the sites boundaries.

At the northern side of the building the grounds are largely laid to vehicle hardstanding and with a narrow area of soft landscape including shrubs and widely spaced trees located at the northern boundary with College Crescent. The area of boundary treatment is predominately level with no significant inclines in any direction. Three mature trees are located upon this boundary including a Horse Chestnut, London Plane and Lime tree.

▪ Design Proposal and Tree Retention

The design proposal allows for the retention of all of these trees. The new northern boundary wall will however extend through the trees Root Protection Areas. Protective measures will therefore be employed to ensure that the trees root system will be preserved and will be allowed to continue to extend into the site.

▪ Protection of Trees During Construction

General Principles

Existing trees can be easily damaged directly through root severance and inadvertently through soil compaction which disrupts the soil structure causing asphyxiation of roots and subsequent root dysfunction. Spillage of toxic materials can also cause root death. Protection for selected trees for retention is essential to ensure their lasting effect on the proposed scheme which will include a proportion of the tree/soil zone.

It is equally important therefore to ensure the protection of trees both above and below ground. Guidance is provided in British Standard 5837, 2005, "Trees in Relation to Construction" as to the protection of existing trees before, during and after development.

Trenching close to trees can have a serious detrimental effect on tree physiology and stability. It will be necessary to consider alternatives to open trenching near trees in order to avoid damage. Guidance is given in the National Joint Utilities Group publication "Guidance for the Planning Installation and Maintenance of Utility Services in Proximity to Trees".

Protective Distances and Fencing

With reference to BS5837;2005 table 2 recommendations for Root Protection Areas for the three trees of amenity value has been included within the Tree Schedule and as the radius of the root Protection Area.

These Root Protection Areas should be included on a proposal drawing as part of the tree protection plan. The Root Protection Areas where possible and appropriate should be enforced by the use of robust protective fencing as outlined in BS5837:2005.

In this instance we would recommend fencing 2.4 metres high consisting of a scaffold framework supporting weldmesh panels (fig. 2 BS5837;2005 Appendix 3). This fencing should be erected at the edge of the vehicle hardstanding and set back 1 metre from the wall foundation line to allow the construction process.

The existing vehicle hard surface will be retained to provide soil and root zone protection during the construction process.

Where light construction processes and pedestrian activity are required to within the trees minimum Root Protection Trees Areas, and upon the area of soft landscaping adjacent to the wall and its footings, the ground between the protective fencing and new wall should be protected by geo-textile fabrics beneath boarding (Fig 3 of BS5837;2005 (Appendix 4).

High visibility tapes bearing the inscription 'Tree Retention Area Keep Out' should identify protective areas.

Tree Protection and Storage of Materials

All materials for construction purposes should be carefully stored outside of the enforced tree protection areas or upon the existing vehicle hardstanding at the front of the property. All toxic substances such as oils, bitumens and residues from concrete mixing should be retained by effective catchment areas and at least 5 metres beyond the Root Protection Areas . The majority of materials can be stored within the existing driveway and hard surface that accesses the site from Beaumont Close and which will provide soil and root protection.

- **Specific Tree Retention and Protection**

Site Access for Demolition and Construction Traffic

Construction traffic will be limited to lighter vehicles and will be confined strictly to the existing driveway and hardsurface that accesses the site from College Crescent.

- **Grade Changes**

There are to be no grade change alterations within the Root Protection Areas of any trees.

- **Direct Damage to Roots and Foundation Design**

The design proposal includes the construction of the new northern boundary wall within the Root Protection Area of the three trees T1, T4 and T5.

However the new wall will be constructed upon the existing foundations of the wall previously demolished. No new excavation for foundation construction will therefore occur within the trees Root Protection Areas. In order to ensure that there is no root damage and soil disturbance is kept to a minimum, the old foundations should be exposed by hand and with the use of hand tools or an air spade retaining all roots over 25 millimetres in diameter and bundles of finer roots. Such works should only occur after the ground protection outlined earlier is applied to the area of soft landscaping adjacent to the foundations and within the trees Root Protection Area.

Once the old foundations have been excavated by hand any exposed roots should be covered with good quality top soil and the ground protection realigned where necessary. The wall can then be reconstructed upon the old foundations.

Other Trees

All other trees on site to be retained should be adequately protected by the enforced protective measures outlined and no further special requirements will be needed.

- **Tree Protection Method Statement**

Before construction works begin and in order to ensure that all the above protective measures are enforced a Method Statement should be devised outlining a logical framework and a reasonable sequence of events and supervisory procedures.

The tree protection method statement should include a drawing depicting all individual and general tree protective distances. The drawing should also depict all areas designated for the storage of materials including catchment areas for toxic fluids, and general access routes for utilities and services.

All protective fencing should be specified in detail for each tree and area.

Detailed specification for special operations should be outlined and agreed including wall foundation construction.

The tree protection method statement should also include a schedule of the sequence of events to ensure all protective measures are adhered to. All relevant construction and development personnel should be informed with respect to the method statement and should be made available to them.

Site supervision to ensure that protective measures are employed and protective distances are strictly enforced should be carried out by both site agent and designated arboriculturalists. This to also include regular visits by the arboriculturalists during construction and a final visit on completion. A reporting procedure should also be implemented and agreed.

This protective method statement scheme can be endorsed by planning conditions, agreement or obligations as any appropriate arrangement between the developer and planning authority. Further discussion between these relevant parties might therefore be necessary in order to finalise this document.

Summary

The proposed boundary treatment allows the retention of all three trees of amenity value T1, T2 and T4. The northern boundary wall and its foundations will encroach upon the Root Protection Area of these trees but will be constructed upon the existing foundations to limit any impact upon these trees. Protective measures including the exploratory excavation of the existing foundations and ground protection will be employed to retain and protect the trees significant roots and root zone.

With the implementation of these specific and the general protective measures listed the proposed boundary treatment can be constructed while ensuring the retention of the sites three trees and their continued contribution to the local landscape.

This concludes our report but if we can be of any further assistance, or should you require any further information, please do not hesitate to contact us.

Michael Honey
HONEY TREE SPECIALISTS

PREDEVELOPMENT TREE SURVEY INSPECTION FORM

Inspection date:March 2010
Client:Robin Pearson
Site: Palmers Lodge

REF: MPH0248/RHB
Surveyor: Michael Honey
Weather:

Tree No	English Name	Height m	DBH cm	Spread m	Vigour	Age	BS Cat 2005.	BS RPA 2005	Comments
T1	Horse chestnut	17	73	7 to 8	N	M	A	8.8m	One of group of prominent street trees of landscape importance, possible old pollard points with small pockets of decay at 8 metres. Climbing inspection advised within the next 3 years.
T2	London Plane	28	17	9 to 10	N	M	A	14	Very prominent and important member of group. Possible old pollard points appears sound, old pruning points, appears sound.
T3	Laburnum	6	22	3 to 4	N	M	C		Small ornamental tree of lesser significance.
T4	Lime	20	74	4 to 5	N	M	B	8.9	One of prominent group. Form and amenity value, slightly compromised by 20% crown reduction. Tight potentially weak codominant union at 3 metres appears sound after crown reduction, however some displacement evident. Reassess in 3 years. Small bark wound at 2 metres.

Notes:

As per BS5837, "Trees in relation to construction", 2005.

1. Height describes the height of the tree from ground level.
2. DBH is the diameter of the trunk at 1.5m from ground level or as defined in the text.
3. Spread refers to the crown radius from the trunk centre and is expressed as an average or NSEW aspect, as appropriate.
4. Age range is represented as Y-young, SM-Semi mature, M-mature, OM-over mature.
5. Vigour is described as N- Normal, INT- Intermediate, L- Low or D-Dead and refers to the general condition of the tree.
6. BS Cat. refers to BS 5837, 2005 retention category table1, where A category retention most desirable(life expectancy 40 yrs +) B retention desirable (20 yrs +) C could be retained (min. 10 yrs) and R (remove). Colours:- A=LIGHT GREEN B=MID BLUE C=GREY R=DARK RED where indicated on plans.
7. BS RPA is BS5837, 2005 recommended Root Protection Area given as the radius of a circle equal to that area; The final RPA may not be represented by a circle within tree protection drawings. All construction operations to take place outside this area.

* RPA based upon canopy spread rather than BS5837, 2005 Table 2

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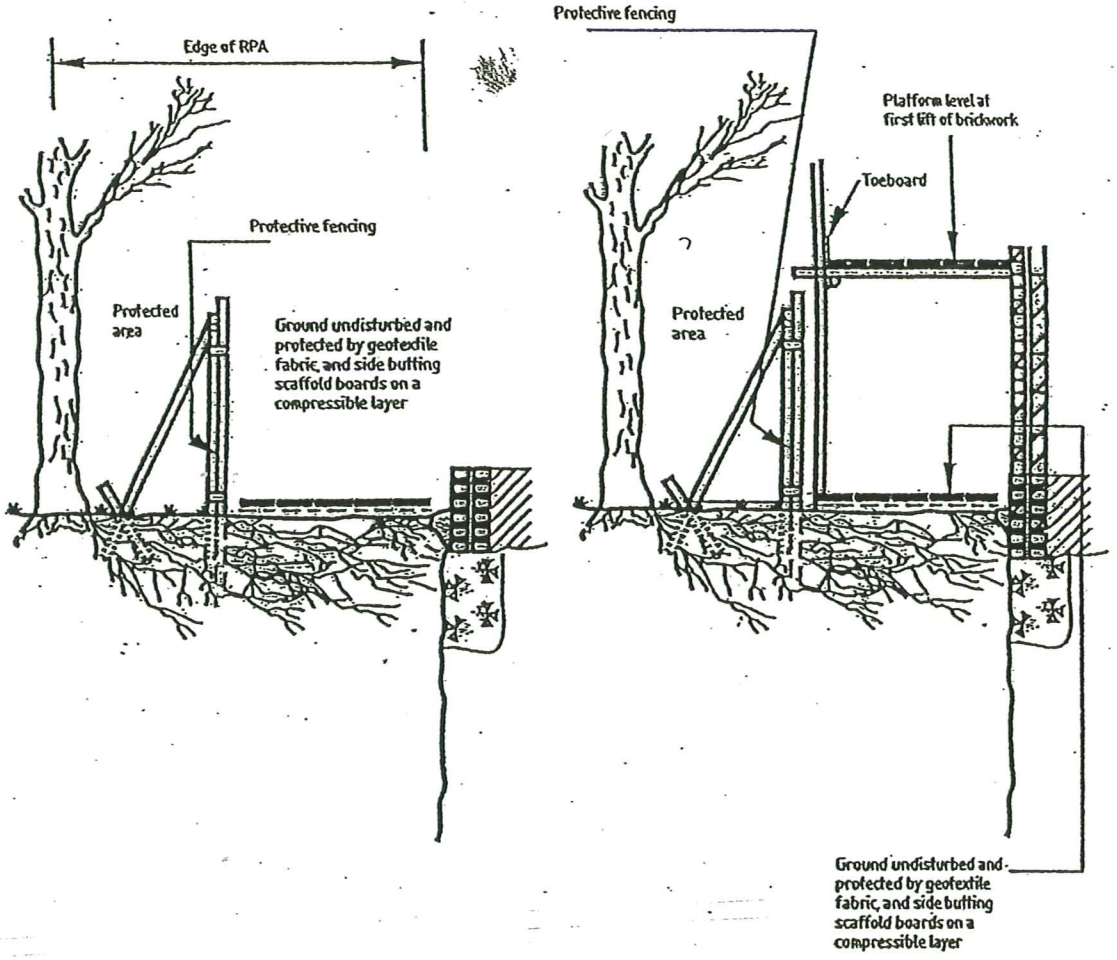
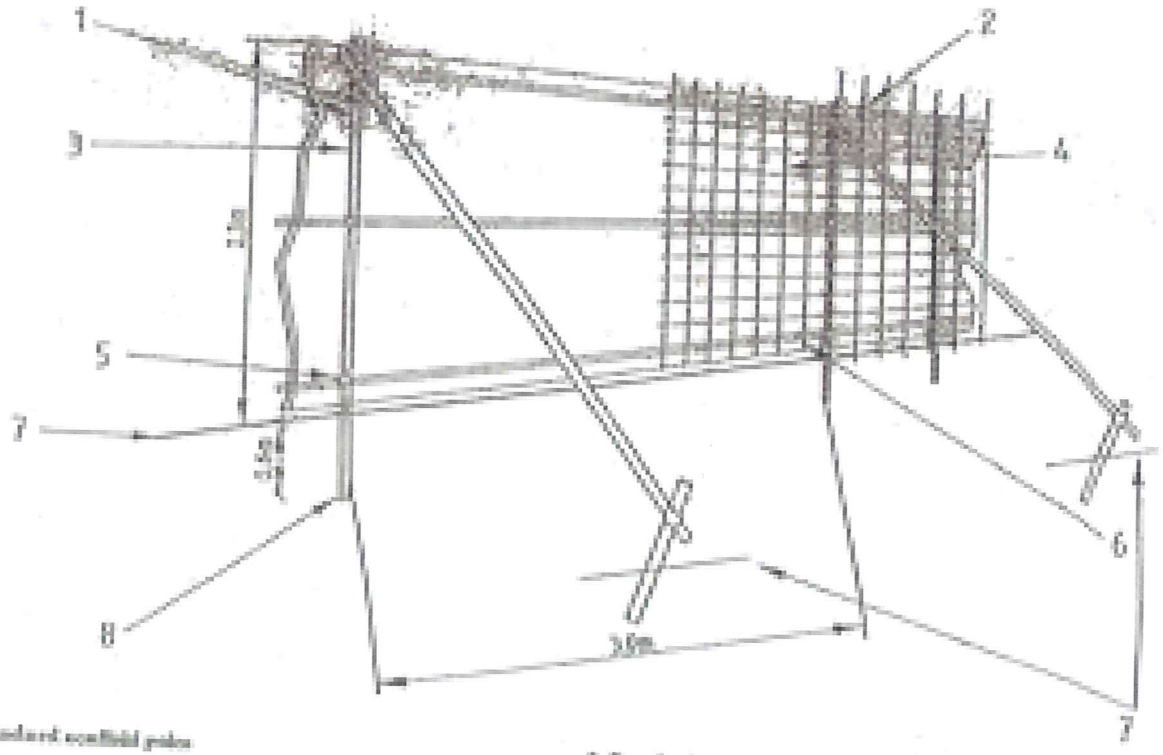


Figure 3 — Scaffolding within the RPA



1 Standard scaffold poles

2 Uprights to be driven into the ground

3 Panels secured to uprights with wire ties and where necessary standard scaffold clamps

4 Waistrails wired to the uprights and horizontals

5 Standard clamps

6 Wire twisted and secured on inside face of framing to avoid easy dismantling

7 Ground level

8 Approx. 0.6 m driven into the ground

Figure 2 — Protective barrier