

Arboricultural Development Report

17 June 2011

[0331]



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This report has been released electronically and the appendices referred to herein can be found in the annexed zip folder/s as .pdf files. If this report is released in hard copy the appendices will be bound into the back of this report. Plans may be annexed separately as A1 or A0 copies where a bound-in A3 copy is not appropriate.

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Appendices

- Appendix I – Tree Survey
- Appendix II – Tree Constraints Plan
- Appendix III – Tree Protection Plan

Executive Summary

This report describes the extent and effect of the proposed development at 15a Parliament Hill on individual trees and groups of trees within and adjacent to the site.

Trees within and adjacent to the site have been surveyed by Arbtech Consulting Ltd using a methodology guided by British Standard 5837:2005 ‘Trees in relation to construction – Recommendations’ (“BS5837”).

Subsequently, this report has been produced, balancing the layout of the proposed development against the competing needs of individual trees and groups of trees within and adjacent to the site. This report comprises all of the requisite elements of an arboricultural implications assessment, method statement and supporting plans.

Checklist for Submission to Local Planning Authority

Tree Survey	<input checked="" type="checkbox"/>
Tree Constraints Plan	<input checked="" type="checkbox"/>
Arboricultural Implications Assessment	<input checked="" type="checkbox"/>
Arboricultural method statement	<input checked="" type="checkbox"/>
Tree Protection Plan	<input checked="" type="checkbox"/>

This report and its appendices follow precisely the strategy for arboricultural appraisal intended to provide local planning authorities with evidence that trees have been properly considered throughout the development process.

It is the conclusion of this report that the overall quality and longevity of the amenity contribution provided for by the trees and groups of trees within and adjacent to the site will not be adversely affected as a result of the local planning authority consenting to the proposed development. Furthermore, any arboricultural matters arising in this report or beyond the scope of it could be addressed with planning conditions if required.

General Information

Client: Patrick Gilmartin & Katherine Woollacott

Site: 15a Parliament Hill, London NW3 2SY

Agent (if applicable): N/A

Brief proposal description: Redevelopment of the property into a larger residential dwelling.

Planning application reference: N/A

Documents referred to:

Document	Reference
Topographical survey drawing	x/1:200-000
Proposed layout drawing	P/1:50-001
Landscape master plan drawing	N/A
LPA pre-app comments	N/A
British Standard 5837:2005	"BS5837"

Limitations

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Tree Survey

Survey: Alan Thompson is an arboricultural surveyor for Arbtech Consulting Ltd. On 11/05/2011 he undertook a BS5837 survey of all trees within impacting distance of the site.

Limitations: The survey was made at ground level using visual observation only. Detailed examinations, such as climbing inspections and decay detection equipment were not employed, though may form part of the survey's management recommendations. Measurements were taken using specialist tapes, laser and GPS devices. Where this was not possible, measurements are estimated.

Scope: Pre-development tree surveys make arboricultural management recommendations based exclusively upon the individual tree or group of trees condition relative to their present context (*i.e. not in relation to the proposed development*).

Land use: The site is a residential property which is occupied by a single dwelling.

Topography: The site is in a suburban area of Northwest Greater London, close to Hampstead Heath. Large mature trees are an essential component of the local landscape character.

Locality: For a built up area there is a significant amount of tree cover and there are numerous examples of very large trees growing in close proximity to the dwellings along the length of the street.

Relative amenity value: Approximately half of the trees surveyed generally contribute to a significant degree to the landscape amenity of the site and wider locality. Other trees are smaller and / or have more restricted viewpoints.

Condition, age and species diversity: The general condition of the trees was good. There is a range of age classes and species, including both native, exotic and naturalised trees.

Status: No statutory protection check has been performed. However, our client has informed us that the site is within a Conservation Area.



Further information: A full schedule including the survey data of all individual trees and groups of trees surveyed can be found at Appendix I.

Arboricultural Implications Assessment

There are a number of issues to be addressed in an arboricultural implications assessment, and broadly these are as follows –

- The effect and extent of the proposed development within root protection areas of retained trees;
- The potential conflicts of the proposed development with canopies of retained trees; and
- The likelihood and reasonableness of any future remedial works to retained trees, beyond that which would have been scheduled in the course of ordinary management.

Development Background

The site is a terrace property on a corner plot of a residential area of Northwest London. The existing house is out of scale in relation to the adjacent dwellings, which have a larger footprint and are considerably taller. The front of the property is characterised by two mature trees, one of which is under the ownership of the Local Council. The majority of the front of the property is hard landscaped with an old tarmac driveway on which stands a small wooden shed. There is an area of lawn surrounding T2.

Special Note: One of the three exemptions of a tree preservation order is detailed planning consent. Further, BS5837 does not take account of statutory protection in its survey criteria weighting. For these reasons, no distinction will be drawn between trees with and/or without statutory protection.

Development Footprint & Below Ground Constraints

Category C Trees and Groups

T3, T4, T6

T4 and T6 shall be retained and protected during development, although BS 5837 does not require it. T3 will require root pruning to facilitate construction though it is advisable to remove and replace it, its retention is possible.

Category B Trees and Groups

T1, T2, T5, T7 - T9

These trees will be retained and protected as part of this the development. T5 and T7 – T9 are outside of the development footprint and can be protected by barrier fencing.

Access will be required to all of the root protection areas of T1 and T2 to facilitate construction. The development footprint also encroaches into the Root Protection Area of these trees as shown in the table below.

Incursion into Root Protection Areas:

Tree Reference No.	Root Protection Area		Approximate incursion of development footprint	
	m ²	%	m ²	%
T1 Lime	162.9	100	19.16	11.76
T2 Birch	63.6	100	7.6	11.94

The level of incursion is not considered significant enough to be harmful to the trees if our protection proposals in the Arboricultural Method Statement are adhered to.

Justification. Due to their age, dominance and quality they are able to provide a significant amenity contribution into the long term and must be retained and protected within the proposed development.

Development Footprint & Above Ground Constraints

Incremental to the tree survey's management recommendations (*which are for reasons of public safety and not in respect of the development*), the following remedial tree works are proposed to ensure no damage occurs to retained trees during demolition, construction and landscaping phases of the proposed development.

Canopy Raised	<ul style="list-style-type: none"> • N/A
Canopy Reduced	<ul style="list-style-type: none"> • Reduce T2 Birch to give up to 1m clearance from the proposed building to facilitate construction. • Prune back T3 Magnolia to boundary to facilitate construction
Other Remedial Works	<ul style="list-style-type: none"> • Prune the root system of T3 Magnolia back to the boundary Refer to arboricultural method statement for Root Pruning.

Development Footprint & Future Tree Works

There are no significant issues arising in relation to light/shading of the site as a consequence of the development as no windows of proposed buildings/annexes are unreasonably shaded by the retained trees. No further pruning is required because of future conflicts arising between trees and buildings. The leaf litter and minor twig debris that can be anticipated is not considered oppressively burdensome to cope with and is unlikely to be harmful to the development.

Loss of Trees

I have recommended the removal of T3, as it may be affected by the development. Accordingly it is not shown on the Tree Protection Plan. However, the tree belongs to a third party who may or may not agree to its removal. Should it be retained then advice on the required tree works is given. It is considered that should the tree be retained, that due to its age it would likely tolerate any pruning only on my client's side of the boundary where necessary to facilitate development. This may be carried out under common law rights if planning permission is granted, which will in effect override the need to follow the notification procedure for tree works in a Conservation Area. The tree is not considered worthy of a Tree Preservation Order due to its small size, limited final

size due to the species and restricted viewpoints, which significantly reduce its public amenity value.

Should the tree be removed, our client has confirmed that they would be willing to plant a replacement of similar size and species in a more suitable location in the affected third party's garden.

Arboricultural Method Statement

Tree Works

For reasons of public safety, all tree works referred to herein must be carried out prior to any site personnel commencing works or any building materials being delivered. Tree works should always be carried out by contractors who can demonstrate appropriate levels of training, experience and insurance for that type of work. Furthermore, all tree work must be carried out in accordance with British Standard 3998:2010 “Tree Work”.

Summary of Tree Works

Tree or Group Reference #	Tree Works
T2	Prune canopy to allow 1m clearance from proposed dwelling.
T3	A - remove to ground level or prune roots and crown back to boundary.

Root Pruning of T3 Magnolia

Where roots are exposed during construction, these shall be pruned back beyond the building footprint using sharp secateurs, loppers or a hand-saw. The cuts shall be made cleanly leaving as small a diameter wound as possible. Where roots in excess of >25mm in diameter are discovered, the advice of the consultant is to be sought and agreed to by the council. During construction, any roots exposed shall be pruned back no more than is required to facilitate construction. Whilst exposed roots should be wrapped in dry, clean hessian sacking to prevent desiccation and to protect from frost etc.

Specification for Protective Barrier Fencing

Protective barrier fencing is to be installed immediately following the completion of the tree works, sited and aligned in accordance with the tree protection plan. Protective

barrier fencing is to remain in situ for the entire duration of the development unless otherwise agreed in writing by the council.

Protective barrier fencing should be appropriate for the intensity and proximity of the development to protect trees where development activity is in close proximity. BS5837 defines protective barrier fencing to be “*a scaffold vertical and horizontal framework, well braced to resist impact with the vertical tubes spaced at a maximum of 3.0m. Onto this, weld mesh panels should be securely fixed with wire or scaffold clamps. Weld mesh panels on rubber or concrete feet are not resistant to impact and should not be used.*” Signage denoting the words “*tree protection area*” at 5.0m intervals should be fixed to the protective barrier fencing.

Prohibition

- Mechanical digging or scraping is not permitted within a defined root protection area or within areas cordoned off by protective barrier fencing.
- Fires are not permitted within ten metres of any vegetation.
- Machinery, plant and vehicles are not permitted to be washed down within five metres of vegetation.
- Leaning objects against or attaching of objects to a tree is not permitted.
- Chemicals and materials are not to be transported, stored, used or mixed within a root protection area or within areas cordoned off by protective barrier fencing.

Specification for tree protective hoarding

The hoarding is to be installed immediately following the completion of the tree works and installation of the ground protection. It must be sited and aligned in accordance with the tree protection plan. Protective hoarding is to remain in situ for the entire duration of the development unless otherwise agreed in writing by the council. This measure is suggested because it is considered that there will be a need for working space, and that the standard Weld mesh panel solution is inappropriate.

The hoarding shall be constructed from 1” thick plywood sheets and shall be a height of 2.4m. The hoarding shall incorporate exposed woody roots around the base of the tree. It shall be free standing and must not lean on or be attached to the tree in any way, so

must be a reasonably close fit to the trunk to prevent movement but must also cover any exposed woody roots at the base of the tree. The plywood sheets shall be attached securely to a sturdy timber framework constructed of 2" x 2" timber, and will be strong enough to withstand the impact of construction vehicles and plant operating nearby.

Boom & Crane Operation

Where cranes and other vehicles or equipment with a boom such as a concrete pump are operated near the canopy of any retained tree:

- The operator shall take great care and avoid any collision with the tree;
- the works shall be supervised e.g. by the site manager, who will provide constant feedback as required to assist the operator;
- Any incidents of damage to retained trees or other breach of tree protection measures shall reported to the Council's Tree Officer and (if retained throughout development) Arbtech Consulting Ltd. Works must cease until the Council have had an opportunity to inspect the damage and where appropriate, agree a mitigation plan.

Services

Where possible, services must installed using existing connections to minimize ground disturbance near trees. Services must not be routed through a Root Protection Area or tree canopy. Where this cannot be avoided:

- works to a tree canopy shall be carried out in consultation with Arbtech Consulting Limited;
- the installation shall be carried out in consultation with and under the supervision of Arbtech Consulting Ltd to ensure no significant roots are severed or damaged.

Ground Protection & Special Surfaces

Where indicated on the Tree Protection Plan, the ground and root protection areas of trees shall be protected temporarily to avoid harm to retained trees during construction. At no time during construction shall any area outside of a Root Protection Area not be covered with ground protection.

Where hard surfacing is required within a root protection area, permanent ground protection must be used as a sub-base for a finished surface is required and this may have an impact on finished levels.

The ground protection shall be laid out in accordance with the Tree Protection Plan appended to this report before construction begins. Where there is an existing hard surface, this will be acceptable as ground protection in the first instance. However, as soon as that surface is removed (leaving the sub-base intact and undisturbed), ground protection shall be deployed. All other areas must be protected with an engineered ground protection solution that must be designed to perform as follows:

- Will be permeable and allow liquid infiltration and gaseous exchange to tree roots.
- Will prevent any soil compaction or loss of soil structure.
- Will be installed above the existing ground level without disrupting the soil structure in tree root protection areas. (excluding the existing hard surface)

Where only pedestrian access is required the area will be protected from pedestrian movements by scaffold boards atop a compressible layer (e.g. wood chips to a depth of around ten centimetres) laid onto a geotextile.

For heavier use cellular confinement system products such as a Cellular Confinement System (CCS) may be suitable. However it is recommended that engineering advice is sought to formulate a design that meets the above specification and vehicles, equipment, plant entering the root protection area.

Recommendations

Site Monitoring

The development's tree protection can be monitored by Arbtech Consulting Ltd, who may be retained to record and report observations to the council at appropriate intervals. As a suggested minimum, the company should visit once to brief site personnel prior to any works commencing; once to sign off the installation of tree protective measures; once per month during the development; and once to sign the development off and recommend that non-permanent tree protective measures can be removed.