



## **Arboricultural Method Statement**

13 Regents Park Road,  
Camden,  
London,  
NW1 7TL

**11 November 2014**

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*If this report has been released electronically the appendices referred to herein can be found in the annexed zip folder/s as .pdf or .dwg files. If this report has been released in hard copy the appendices will be bound into the back of this report. Plans may be annexed separately as A1 or A2 copies where a bound-in A3 copy is not appropriate.*

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## Executive Summary

This report describes the extent and effect of the proposed development at 13 Regents Park Road on individual trees and groups of trees within and adjacent to the site.

Trees within the site were surveyed; using a methodology guided by British Standard 5837:2012 ‘Trees in relation to design, demolition and construction – Recommendations’.

Subsequently, this report has been produced, balancing the layout of the proposed development against the competing needs of trees. 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 impact 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. It is considered that any issues raised in this report, or beyond the scope of it can be dealt with by planning conditions.

## General Information

**Client:** Mr Anthony Parsons

**Site:** 13 Regents Park Road, Camden, London, NW1 7TL

**Brief proposal description:** Demolition of existing extension and creation of new build extension.

**Planning application reference:** N/A

### Documents referred to:

Document	Reference
Topographical survey drawing	13014 – Survey Drawings
Proposed layout drawing	Planning Proposal
Landscape master plan drawing	N/A
LPA pre-app comments	N/A
British Standard 5837:2012	'Trees in relation to design, demolition and construction – Recommendations'
Arboricultural Impact Assessment	BS5837 – 13 Regents Park Road - Arbtech AIA 01
Tree Protection Plan	BS5837 – 13 Regents Park Road - Arbtech TPP 01

## Tree Survey

**Survey:** An arboricultural survey to BS5837 of all trees within impacting distance of the site was undertaken by Jon Hartley on 29<sup>th</sup> April 2014.

**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*).

\* For more information on the surveyed trees please see Arbtech Consulting Ltd, Tree Survey Schedule, Tree Survey Report and Tree Constraints Plan.

## Arboricultural Impact Assessment

There are a number of issues that may need to be addressed in an arboricultural impact assessment between the trees and the proposed development, these are as follows –

- The effect and extent of the proposed development within the root protection areas (RPAs) of retained trees:

Tree No.	Species	Proposed structure	RPA	Incursion
1	Common lime	Extension	104m <sup>2</sup>	9.3 %
5	Horse chestnut	Extension	452m <sup>2</sup>	3.2 %
7	Common Ash	Extension	222m <sup>2</sup>	2.7%

These impacts can be seen on the Arboricultural Impact Assessment drawing no. BS5837 – 13 Regents Park Road - Arbtech AIA 01

### Trees to be removed

The proposal does not require the removal of any trees.

U	A	B	C
0	0	0	0

## **Arboricultural Method Statement**

Details of key site personnel, including site / project manager will be submitted to the Council's Tree Officer prior to the commencement of site works.

This method statement is to be approved and agreed to in writing by all key personnel prior to the commencement of site works.

No site personnel are to be present and no demolition, site clearance, building work or delivery of materials is to occur until the protective measures are in accordance with this method statement and the Tree Protection Plan drawing no. Arbtech TPP 01.

Protective measures should be in accordance with this method statement and the Tree Protection Plan; drawing no. Arbtech TPP 01 will remain unaltered and in situ, unless otherwise specified, for the entire duration of the construction.

## **Accidents and emergencies involving trees**

Any accidents and emergencies involving trees shall be immediately reported to Arbtech and their advice sought and agreed to by the council.

## **Phasing of tree protection measures**

The tree protection measures shall be phased as follows.

- a) Undertake any required tree works
- b) Install the protective measures in accordance with the approved protection plans and this method statement
- c) Undertake any demolition works
- d) Undertake and complete construction works
- e) Undertake external landscape works to areas outside of construction exclusion zones
- f) Remove protective measures
- g) Undertake external landscaping works within the construction exclusion zones
- h) Sign off from the company as no further involvement required

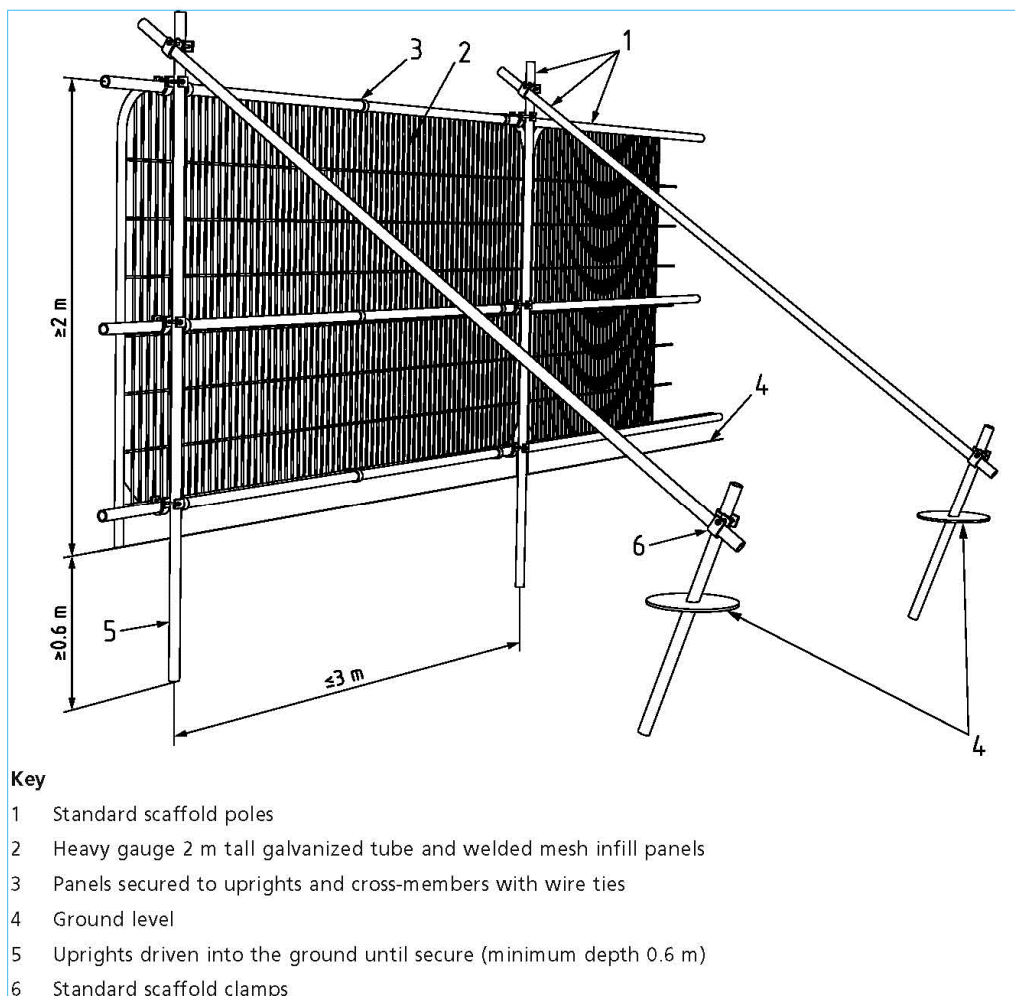
## Protective Measures

Protective measures are to be installed immediately following the completion of the tree works, and are to be sited and aligned in accordance with the tree protection plan (BS5837 – 13 Regents Park Road - Arbtech TPP 0).

### Protective Barrier Fencing – See BS5837 – 13 Regents Park Road – Arbtech TPP 01 for location of protective fencing

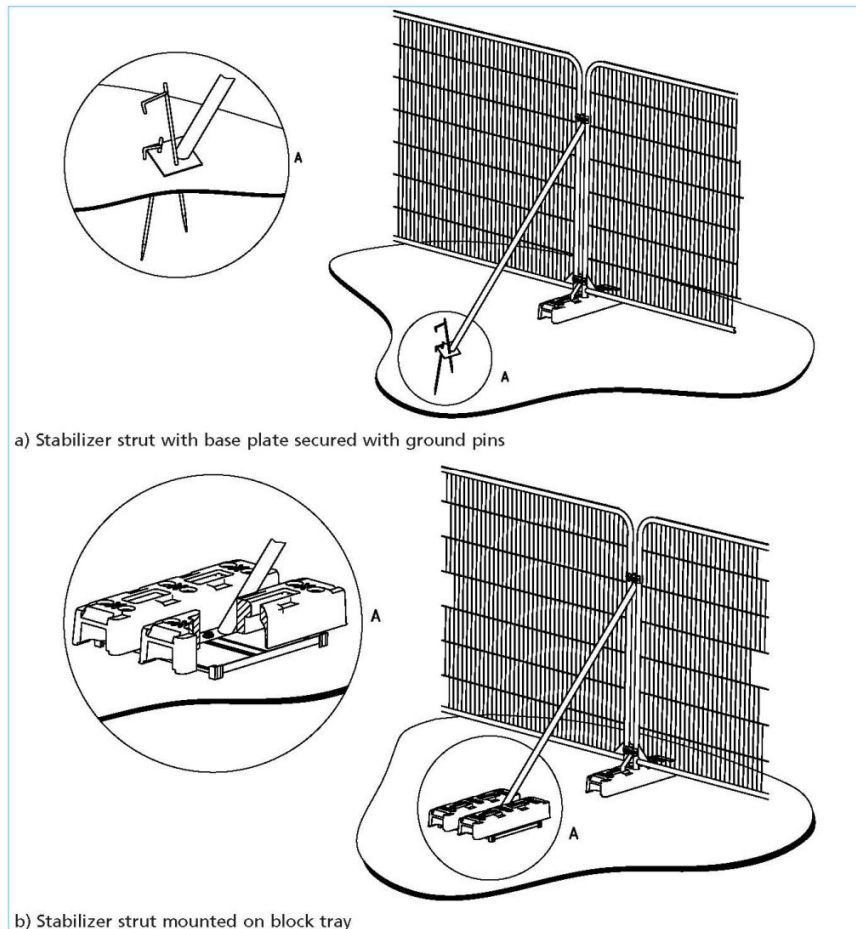
Protective barrier fencing should be appropriate for the intensity and proximity of the development to protect trees where development activity is in close proximity.

Default specification: To comprise either 2.4m wooden site hoarding; or a 2.3m high scaffold framework, well braced to resist impacts, with uprights to be spaced at a maximum of 3.0m intervals and driven into the ground by a minimum of 600mm. On o this, standard anti-climb welded mesh panels are to be securely fixed to each other with at least two scaffold clamps and to the scaffold frame work with wire.





Secondary specification: To comprise of 2m tall welded mesh panels on rubber or concrete feet. Panels are to be joined together using a minimum of two anti-tamper couplers, installed so that they can only be removed from inside the fence. The panels should be supported on the inner side by stabiliser struts, which should be attached to a base plate and secured with ground pins.



Signage denoting the words “*tree protection area*” at 5.0m intervals should be fixed to the protective barrier fencing (See Appendix 1).



Protective fencing is to be removed **ONLY** with the written permission of the arboricultural consultant and approval of the local planning authority (LPA).

## Site management

The site manager will be responsible for briefing all personnel who will be working within or adjacent to canopies or RPAs of retained trees and provide or make available to them a copy of this method statement and tree protection plan drawing no. Arbtech TPP01; this is to include but not exclusively of the movement / operation of plant, excavations, unloading deliveries, mixing / pouring cement and concrete.

The site manager shall designate another person to be in charge of briefing new site personnel or visitors in his absence.

No equipment, vehicles or plant shall operate beyond the tree protection fencing. Booms, hoists and rigs should be kept as far away from the canopies of retained trees at all times. Where it is necessary to operate within 5m of a tree canopy, it will be done with the utmost caution and under the control of a banks man. Damage to trees will be considered a breach of this tree protection plan, which in turn could be a breach of planning permission.

Any incidents of damage to retained trees or other breach of tree protection measures shall be reported to the Arbtech Consulting Ltd. Works must cease until the project arborist has had an opportunity to inspect the damage and where appropriate, agree a mitigation plan.

## Prohibition

- Mechanical digging or scraping is not permitted within a defined root protection area or within areas cordoned off by protective barrier fencing.
- No access will be permitted within the protected areas;
- No materials, equipment or debris will be stored within any of the fenced areas, or against the fencing;
- Fires are not permitted within 5.0m of any vegetation.
- Leaning objects against or attaching of objects to a tree is not permitted.
- Machinery, plant and vehicles are not permitted to be washed down within 10.0m of vegetation.
- 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.
- Cement silos, mixing site to be situated within a bunded area to prevent pillage/leaking of chemicals harmful to trees. These areas are to be sited well clear of protected trees.
- Refuelling of plant or machinery is prohibited within 10m of the construction exclusion zones.
- It is essential that allowance should be made for the slope of the ground so that damaging materials such as concrete washings, mortar or diesel oil cannot run towards trees.
- Where machinery is to be used within 5m of retained tree canopies a banks man will be required at all times whilst setting up, moving or operating within this area.

## Demolition

Prior to the demolition of the existing site features, all tree works are to have been completed, tree protection measures are to be in place as per Arbtech Consulting Ltd. tree protection plan document no. Arbtech TPP 01 and have been signed off and a copy of the demolition method statement has been submitted and approved by the project arboriculturist and LPA tree officer, to ensure that there is no conflict with this method statement.

All demolition work within or immediately adjacent to RPAs or canopies of retained trees is to be undertaken under the direct on-site supervision of an arboriculturist.

### **Foundations within the RPAs of trees nos. 1, 5 & 7**

Demolitions of the existing foundations are to be undertaken to the minimum depth required to allow for the installation of the new proposal.

The removal of the existing foundations within the RPA of retained trees are to be undertaken using a hand held pneumatic breaker, hand tools and wheel barrows to break up and remove the debris out of the RPA. In some situations and only at the discretion of the arborist it may be possible to use an excavator using a hydraulic breaker and a suitably sized toothless grading bucket.

It may be permitted by the project arboriculturist for an excavator to undertake the demolition and removal of the foundation but it must be situated outside of the RPA, on top of the hard surfacing working away from the RPAs or from suitable ground boarding capable of handling the expected loading.

If it is likely that there will be any soil collapse or the trench begins to collapse within the RPAs of retained trees which will lead to the loss of rooting environment, excavations are to be stopped immediately and the trench is to be shored up to prevent further soil collapse.

Where the removal of foundations occurs within the RPAs of retained trees these voids are to be back filled with clean top soil.

## Construction

### **Foundations design within the RPAs of trees nos. 1, 5 & 7**

New foundations for buildings, structures and hard surfacing situated within the RPAs of retained trees are to be designed in conjunction with arboricultural advice to accommodate the likely loading of the structure. The foundations will be designed to limit the amount of excavation required within RPAs to retain roots that are important to the trees stability as identified during the site investigations.

The use of strip foundations within RPAs of retained trees can cause extensive root loss and as such are to be avoided.

Design of foundations for the new dwelling and retaining wall within the RPA of trees no. 1 are to be designed to minimise the adverse impact upon trees and should pay particular attention to the existing ground levels and proposed finished floor level. Foundation design should be undertaken using site specific information in conjunction with the project arboriculturist and engineer.

Root damage can be minimised using:

- Piles, with a site investigation it is possible to determine their optimal location whilst avoiding damage to roots important for the stability of the tree. Investigative excavations are to be undertaken with the use of hand tools or compressed air displacement to a minimum depth of 600mm;
- Beams laid at or above ground level and or cantilevered as necessary to avoid tree roots identified by the site investigation.

Where piling is to be installed near to trees, the smallest practical pile diameter should be used, as this reduces the possibility of striking major tree roots, and reduces the size of the rig required to sink the piles. If a piling mat is required, this should conform to the specification for ground boarding.

All and any excavations that may be required for foundations within the RPAs of retained trees will initially be undertaken manually under arboricultural supervision (see Manual excavation below).

## **Hard Surfacing within the RPA's of retained trees.**

If any new hard surfacing to be situated within the RPAs of retained trees is to be designed in conjunction with arboricultural advice to accommodate the likely loading.

### **Concrete foundations**

Prior to concrete being poured to form the foundations within or immediately adjacent to the RPAs of retained trees the excavation is to be lined and sealed to prevent any leaching of the concrete into the soil and causing desiccation of retained roots by concrete run off.

### **Manual excavation**

Excavation within RPAs will be undertaken by hand under direct on-site arboricultural supervision of the required depth of the foundation; Or to a minimum of 600mm deep of any excavation, whether for proposed foundations, hard surfacing or underground services. The total depth of the manual excavation will be determined by the arboriculturist whilst on site.

The soil is to be loosened with the aid of a fork or pick axe and then cleared with the aid of an Air-spade, Air-vac and or shovel. Any roots found will be cleanly severed by the arboricultural consultant with either a hand saw or secateurs.

Any roots found with a diameter of less than 25mm shall be cleanly severed by the arboricultural consultant. Any roots of 25mm and above shall be excavated around without damaging them; the arboricultural consultant shall decide if it's feasible or necessary to retain the root, if not it shall be severed.

The edge of the excavation closest to the trees will be covered with damp hessian to prevent soil collapse or contamination by concrete.

Soil beneath the depth may be sheet piled, regular piled or excavated deeper. Machinery may be used for this providing that it is situated outside of the RPA or has appropriate ground protection in place to move around on and work upon.

## Services

Detailed drawings of proposed underground services are not available at this time; hence it is not possible to identify any specific potential impacts associated with the scheme at this stage.

Existing services within the site should be retained where ever possible. Where existing services within RPAs require upgrading, the upmost care must be taken to minimise disturbance, and where feasible trenchless techniques are to be employed, and only where necessary should open excavations be considered.

Where new services are to be introduced into the site they should be located outside of RPAs, where they will not interfere with tree roots. If any excavations are required within the RPAs all trenches are to be excavated by hand and radially to the tree trunks under direct on-site arboricultural supervision and are to be carried out under NJUG guidelines.

Final positions of any proposed services should be verified and approved by the arboricultural consultant and local authority tree officer before implementation.

## Monitoring and Supervision

The development's tree protection is to be monitored by Arbtech Consulting Ltd, who should be retained to record and report observations to the council at appropriate intervals.

Prior to the commencement of any works on site a pre-start meeting is to be held to discuss the protection methodology, arboricultural method statement and swap contact details (See Appendix 1).

As a suggested minimum, the arboricultural consultant should visit once to check that the tree protective measures are in the correct location and if so to sign off their installation.

There after visits at regular intervals, to ensure that tree protection measures are in place and are functioning as designed or whenever necessary to undertake works to be carried out under arboricultural supervision. The frequencies of the arboricultural monitoring visits are to be decided with the LPA tree officer at the pre-start meeting. A record of these visits will be kept and any faults will be logged, this will then be copied to the site agent, developer and local planning authority.

Regular contact will be maintained with the site manager to determine any forthcoming operations that may make an impact upon the tree protection measures and when/if any arboricultural supervision is required.

The arboricultural consultant will be advised a minimum of 72 hours prior to the commencement of any works that require his attendance, i.e. installation of underground services, removal/construction of hard surfacing, any excavations within or adjacent to the RPAs.

Once all construction works have been completed all materials and machinery has been removed from site the arboricultural consultant shall visit the site and to sign the development off and recommend that protective measures can be removed.




## Appendix 1 –Tree Protection Notice for Fencing



## Appendix 2 - Contact Details

Name	Position	Company	Contact
Mr Anthony Parsons	Client	n/a	n/a
	Tree Officer		
Alan Thompson	Arboricultural Consultant	ARBTECH Consulting Ltd.	07703 676 216 <a href="mailto:at@arbtech.co.uk">at@arbtech.co.uk</a> <a href="mailto:email@arbtech.co.uk">email@arbtech.co.uk</a>
Mr Luke Pulham	Architect	Red & White Design	<a href="http://www.redandwhitedesign.co.uk">www.redandwhitedesign.co.uk</a>
	Main contractor		

## Document Production Record

Document number	Editor	Signature	Position	Issue number	Date
Arbtech AMS 01	Alan Thompson		Surveyor	1	11/11/2014

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