GHA Trees
5 South Drive
High Wycombe
Bucks
HP13 6JU

Glen Harding
MSc (Forestry), MArborA
t: 07884 056025
e: glen@ghatrees.co.uk
www.ghatrees.co.uk

Arboricultural Method Statement:
36 Redington Road, London, NW3 7RT

18th March 2019

Ref: GHA/MS/123560:19

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Method Statement

Location: 36 Redington Road, London, NW3 7RT
Ref: GHA/MS/123560:19
Client: Archetype
Date: 18th March 2019
Report Prepared by: Glen Harding MSc (Forestry), MArborA
Date of Inspection: 27th February 2019

Please note that abbreviations introduced in (brackets) *may be used throughout the report.*

Instructions

Issued by – Archetype

TERMS OF REFERENCE – To survey the subject trees within 36 Redington Road, in order to assess their general condition and to provide an arboricultural method statement for the approved development, that safeguards the long term well being of the nearby retained trees and satisfies planning condition number 6 (decision notice ref: 2015/3004/P).

Executive Summary

The proposal for the site is to demolish the existing house and then construct a new house with an associated basement. The proposed scheme requires the removal of a small number of relatively insignificant trees and shrubs, which will not significantly impact the local or wider landscape. The retained trees require protection in accordance with industry best practice and BS 5837: 2012 – Trees in relation to design, demolition and construction – recommendations, in order to ensure their longevity.

Documents Supplied

Achetype supplied the following documents:

1. Existing layout plans
2. Proposed layout plans
3. Existing elevation plans
4. Proposed elevation plans

Scope of Survey

1.1 The survey is concerned with the arboricultural aspects of the site only.

1.2 The planning status of the subject property was not investigated in detail.

1.3 A qualified Arboriculturist undertook the report and site visit and the contents of this report are based on this. Whilst reference may be made to built structure or soils, these are only opinions and confirmation should be obtained from a qualified expert as required.

1.4 Trees in third party ownership were surveyed from within the subject property, therefore a detailed assessment was not possible and some (if not all) measurements were estimated. Where the stem location of a third party tree has been estimated, this is noted on the plan.

1.5 Dense vegetation or climbers (such as ivy) also prohibited full inspections for some trees; this is noted where applicable.

1.6 No discussions took place between the surveyor and any other party.

1.7 The trees were inspected on the basis of the Visual Tree Assessment method expounded by Mattheck and Breleor (The body language of tree, DoE booklet Research for Amenity Trees No. 4, 1994)

1.8 The survey was undertaken in accord with British Standard 5837: 2012 – Trees in relation to design, demolition and construction – recommendations.

1.9 Pruning works will be required to be in accord with British Standard 3998 – 2010 (Tree Work - Recommendations).

1.10 Underground services near to trees will need to be installed in accord with the guidance given in BS5837 together with the National Joint Utilities Group Booklet 4: 2007 Guidelines for the planning, installation and maintenance of utility services in proximity to trees (NJUG4).

1.11 The client's attention is drawn to the responsibilities under the Wildlife and Countryside Act (1981).

Survey Method

2.1 The survey was conducted from ground level with the aid of binoculars if needed.

2.2 No tissue samples were taken nor was any internal investigation of the subject trees undertaken.

2.3 No soil samples were taken.

2.4 The height of each subject tree was estimated using a clinometer and recorded to the nearest half metre.

2.5 The stem diameter for each tree was measured in line with the requirements set out in BS 5837: 2012 – Trees in relation to design, demolition and construction – recommendations.

2.6 The crown spreads were measured with an electronic distometer and recorded to the nearest half metre. Where the crown radius was notably different in any direction this has been noted on the Plan (appendix A) and within the tree table (Appendix B). The crowns of those trees that are proposed for removal, or trees where the crown spread is deemed insignificant in relation to the proposed development are not always shown on the appended plan; however their stem locations are marked for reference.

2.7 The Root Protection Area (RPA) for each tree is included in the tree table, both as an area, and as the radius of a circle.

2.8 The crown clearance was measured using a clinometer and recorded to the nearest half metre. Where it is significantly lower in one direction, this is noted within the tree table at appendix B.

2.9 All of the trees that were inspected during the site visit are detailed on the plan at Appendix A; this plan was produced in colour and **MUST** only be scanned or reproduced in colour. The trees on this plan are categorised and shown in the following format:

COLOUR CODING AND RATING OF TREES:

Category A – Trees of high quality with an estimated remaining life expectancy of at least 40 years. Colour = light green crown outline on plan.

Category B – Trees of moderate quality with an estimated remaining life expectancy of at least 40 years. Colour = mid blue crown outline on plan.

Category C – Trees of low quality with an estimated remaining life expectancy of at least 40 years, or young trees with a stem diameter below 150mm. Colour = uncoloured crown outline on plan.

Category U – Those in such a condition that they cannot realisitically be retained as living trees in the context of the current land use for longer than 10 years. Colour = red crown outline on plan.

All references to tree rating are made in accordance with BS 5837: 2012 – Trees in relation to design, demolition and construction – recommendations', Table 1.

The Site

3.1 The site is located on Redington Road, a residential through road located to the in the Hampstead area of north west London.

3.2 A good tree cover is present on the site itself as well as adjacent sites, with many semi-mature and mature trees of both native and exotic origin characterising the local area.

The Subject Trees

4.1 The details of the subject trees are set out in the Schedule at Appendix B.

4.2 Of the ten individual trees, and groups of trees surveyed, five have been assessed as BS 5837 category B, with the remaining trees being assessed as BS 5837 category C.

Category B	5 trees
Category C	5 trees

The Proposal

5.1 The proposal for the site is to demolish the existing house and then construct a new house with an associated basement.

5.2 The proposed location of the above structures can be seen on the appended plan.

Method Statement and Procedures for Development Works

6.1 TREE PRUNING / REMOVAL

A list of all tree works that are required (including trees to be removed) is included in the tree table at Appendix B. Pruning / removal has only been specified for the following reasons:

- Where work is necessary to implement the approved scheme.
- Where works are required for safety reasons.
- Where work is required to improve tree form, or improve the appearance of overgrown areas of the site.

Where any tree work is needed, this work will be in accordance with British Standard 3998 – 2010 (Tree Work - Recommendations).

6.2 TREE PROTECTION BARRIERS

It is essential for the future health of the trees to be retained on site, that all development activity is undertaken outside the root protection zone of these trees, whenever this is practical. The position of the proposed protective fencing for the site is shown on the plan 'Appendix A' by a pink line. The position of the fence is to be marked out with biodegradable marker paint on site and agreed with appropriate representatives from the LPA and contractor. The fencing will be erected **prior** to any works in the vicinity of the trees and removed only when all development activity is complete. The protective fencing will be as that shown in BS 5837 (see Appendix C). The herras panels must be joined together using a minimum of two anti-tamper couplers which must be installed so they can only be removed from the inside of the fence. The panels should supported by stabilizer struts, which must be installed on the inside and secured to the ground using pins or appropriate weights.

The Fence must be marked with a clear sign reading:

"Construction Exclusion Zone – No Access"

6.3 GROUND PROTECTION – LIGHTWEIGHT ACCESS ONLY

An area of the garden will require ground protection to ensure that soil erosion or excessive compaction does not occur. The areas where this protection is required are outlined in orange hatching on the appended plan. This area will be covered with a permeable membrane, with 100mm layer of compressible woodchip overlaying it; an 18mm marine ply boards will then be secured on top of the woodchip to allow a 1.5tonne mini-digger to access the area without causing major compaction or soil erosion.

6.4 BASEMENT EXCAVATIONS

The section of new basement section nearest to the offsite trees to the south will be excavated by hand for the first 600mm to minimise root damage. These excavations within the RPAs **MUST NOT** be undertaken with the use of any mechanised machinery (minidiggers, JCBs or alike). **HAND TOOL** excavations will only be undertaken by fully briefed site personnel. This operation will be done slowly and carefully to ensure the identification and protection of any roots that are discovered that are in excess of 25mm; **these roots will then be cut at the edge of the new basement outline using sharp tools to leave a**

'clean' cut, in order to minimise the risk of infection by decay pathogens. NOTE: OPERATIVES MUST CHECK FOR THE PRESENCE OF ANY EXISTING UNDERGROUND SERVICES PRIOR TO THE COMMENCEMENT OF SUCH WORK.

6.5 DELIVERY AND STORAGE OF BUILDING MATERIALS

Due to the limited on-site storage space, it may be necessary for bulk deliveries to be split into smaller deliveries. The use of a "just in time" delivery method can also be adopted to reduce the time materials are stored on site before use.

6.6 SITE HUTS, WELFARE FACILITIES AND STORAGE OF EQUIPMENT, MATERIALS AND CHEMICALS

All site huts will be positioned outside of the retained trees RPA's.

6.7 MIXING OF CONCRETE

All mixing of cement / concrete must be undertaken outside of the RPA of all of the retained trees.

6.8 USE CRANES, RIGS AND BOOMS

Precautionary measures must be observed to avoid contact of any retained trees when manoeuvring cranes rigs or booms into position.

6.9 INCOMING SERVICES AND SOAKAWAYS

Any new underground services which are to be located within (any portion of) the RPAs of any trees which are to be retained **MUST** be installed in accord with the guidance given in BS5837 together with the National Joint Utilities Group Booklet 4: 2007 Guidelines for the planning, installation and maintenance of utility services in proximity to trees (NJUG4). Service installation layouts **MUST** be planned to keep apparatus together in common ducts, in order to minimise the need for excavations. Service trench excavation within the RPAs **MUST NOT** be undertaken with the use of any mechanised machinery (minidiggers, JCBs or alike). Instead, these service trenches must be excavated using **hand tools only.**

HAND TOOL excavations will only be undertaken by fully briefed site personnel. This operation will be done slowly and carefully to ensure the retention and protection of any roots that are discovered that are in excess of 25mm. These roots **MUST** then be covered and protected using damp hessian whilst further excavation commences; hessian must be left in situ until backfilling commences and re-wetted if needed to avoid root desiccation. **NOTE: OPERATIVES MUST CHECK FOR THE PRESENCE OF ANY EXISTING UNDERGROUND SERVICES PRIOR TO THE COMMENCEMENT OF SUCH WORK.**

Once the trench is excavated to the correct depth, care must then be taken to ensure the new service ducts are installed so as to avoid any roots present. **Any roots that require pruning should be cut using sharp tools to leave a 'clean' cut, in order to minimise the risk of infection by decay pathogens.** The trench must then be backfilled and the soil compacted using hand tools only, to ensure not air pockets are left as these can be damaging to tree roots.

6.10 ON SITE SUPERVISION

Regular site supervision is essential to ensure all potentially damaging activities near to trees are correctly supervised. A pre start meeting will occur to ensure all parties are aware of their responsibilities relating to tree protection on site; this will include a site induction for key personnel.

The key personnel relating to this project are:

Name	**Position**	**Contact number / email:**
Glen Harding	Retained arboriculturalist	07884 056 025 Or glen@ghatrees.co.uk
TBC	Local authority Arboricultural Officer	TBC
Michelle Sweeney	Project Architect	0207 486 3666 or michelle@archetype.org.uk
Elez Sufa	Site manager	0772 765 2506 or sufa@esstructuresltd.co.uk

A detailed supervision programme will be devised by the developer and retained Arboriculturalist, ensuring that Arboricultural supervision is present at the appropriate periods during construction. It is deemed necessary for the retained arboriculturalist to visit the site at the following critical points.

- Prior to tree pruning / removal to ensure work is correctly identified. **Date and time yet to be agreed, however once confirmed, these dates will be sent to the Local Planning Authorities Arboricultural Officer in order that he / she can attend if required.**

- Following completion of tree pruning / removal to ensure work is completed to the correct specification. **Date and time yet to be agreed, however once confirmed, these dates will be sent to the Local Planning Authorities Arboricultural Officer in order that he / she can attend if required.**

- Prior to erection of protective fencing to ensure it is located in the correct locations. **Date and time yet to be agreed, however once confirmed, these dates will be sent to the Local Planning Authorities Arboricultural Officer in order that he / she can attend if required.**

- Following completion of the erection of protective fencing to ensure it is constructed to the correct specification at the required proximity to ensure the healthy retention of the trees. **Date and time yet to be agreed, however once confirmed, these dates will be sent to the Local Planning Authorities Arboricultural Officer in order that he / she can attend if required.**

- Installation of the ground protection to ensure it is constructed to the correct specification at the required proximity. **Date and time yet to be**

agreed, however once confirmed, these dates will be sent to the Local Planning Authorities Arboricultural Officer in order that he / she can attend if required.

- Excavation of basement outline. **Date and time yet to be agreed, however once confirmed, these dates will be sent to the Local Planning Authorities Arboricultural Officer in order that he / she can attend if required.**

- Pre start and periodically during demolition of the existing building(s) to ensure no damage occurs to the retained trees. **Date and time yet to be agreed, however once confirmed, these dates will be sent to the Local Planning Authorities Arboricultural Officer in order that he / she can attend if required.**

- In addition to the above, random inspections of the site may also be undertaken during construction to ensure the Arboricultural responsibilities are being fulfilled by the developer. A full, written assessment of each visit will be sent the Local Panning Authority and copied to the developer at the expense of the applicant. Any issues relating to tree protection will subsequently be addressed immediately. **It is deemed appropriate, given the scale of development, that site supervision visits are undertaken at least once every 4 weeks.**

During this meeting, future requirements for site supervision will be agreed. The records of future site monitoring will be recorded on the site monitoring sheet at appendix D, and submitted to the local planning authority for their records.

6.11 OTHER TREE PROTECTION PRECAUTIONS

- No fires lit on site within 20 metres of any tree to be retained.
- No fuels, oils or substances with will be damaging to the tree shall be spilled or poured on site.
- No storage of any materials within the root protections zone.

6.12 HARD / SOFT LANDSCAPING NEAR RETAINED TREES

All new pathways and hard landscaping areas within the Root Protection Areas (RPA's) of the retained trees should be designed using no-dig, up and over construction techniques, and be specified in close co-ordination with the retained Arboriculturalist. Porous materials should also be used when surfacing near the trees. No machinery will be used for this work, which must all be done by hand.

6.13 SPECIFICATION FOR LAYING NEW GRASS BENEATH TREES

- Any Imported topsoil must be in accordance with the current British Standard 3882:2015 Specification for Topsoil and Requirements for Use i.e. good quality, screened and free from contaminants e.g. oil, diesel fuel, toxic materials or heavy metals, perennial weeds etc .

- No machinery may be operated within the canopy of any retained tree during the installation of soft landscaping, i.e there must be no mechanical rotivation, rolling or use of other machinery. Any cultivation necessary shall be undertaken by the use of hand tools only. Compaction of the ground within the canopy of

any retained tree must not occur. If compaction does occur the ground will be immediately de-compacted with an air spade to a minimum dept of 500mm

- Preparations for turf application will be carried out during appropriate weather conditions. They will include close cutting and spraying any weed growth with a systemic herbicide. All Chemicals used shall be non toxic to human beings, birds and animals, under normal use and chemicals no on the 'Agricultural Chemicals Approved Scheme' current list of approved products shall not be used.

- Time of sowing. Grass seeding/Turfing works may be carried out from May to September in appropriate weather conditions

- No turf will be laid on water logged soils, exceptionally dry weather or during air/ground frost

- Grassing works: Preparation and grassing works shall be carried out in general accordance with the requirements of Section 5 of the current British Standard 4428 Recommendations for General landscape Operations.

- Turfs shall be in supplied in accordance with the current British Standard 3969:1992 Recommendations for Turf for General landscape Purposes. Turfs shall be clean meadow or downland turfs, fibrous and well rooted, free from matted dead grass and perennial weeds and shall have been subject to proper maintenance and treatment with selective weed killers and insecticides during the previous growing season.

- Under no circumstances will the soil levels be lowered or deeply cultivated

6.14 DISMANTLING PROTECTIVE BARRIERS
Protective barriers must only be completely removed when all machinery, and equipment has left site. A minimum of seven days notice must be given to the local planning authority prior to dismantling works begin.

Conclusion

7.1 Subject to precautionary measures as detailed above, the proposal will not be injurious to trees to be retained.

Recommendations

8.2 Site supervision – An individual e.g. the Site Agent, must be nominated to be responsible for all arboricultural matters on site. This person must:

a. Be present on the site the majority of the time.
b. Be aware of the arboricultural responsibilities.
c. Have the authority to stop any work that is, or has the potential to cause harm to any tree.

d. Be responsible for ensuring that all site personnel are aware of their responsibilities towards trees on site and the consequences of the failure to observe those responsibilities.
e. Make immediate contact with the local authority and / or retained arboriculturalist in the event of any related tree problems occurring whether actual or potential.

8.3 It is recommended, that to ensure a commitment from all parties to the healthy retention of the trees, that details are passed by the architect or agent to any contractors working on site, so that the practical aspects of the above precautions are included in their method statements, and financial provision made for these.

18th March 2019
Signed:

Glen Harding MSc (Forestry), MArborA
For and on behalf of GHA Trees

Appendix A

Appendix B

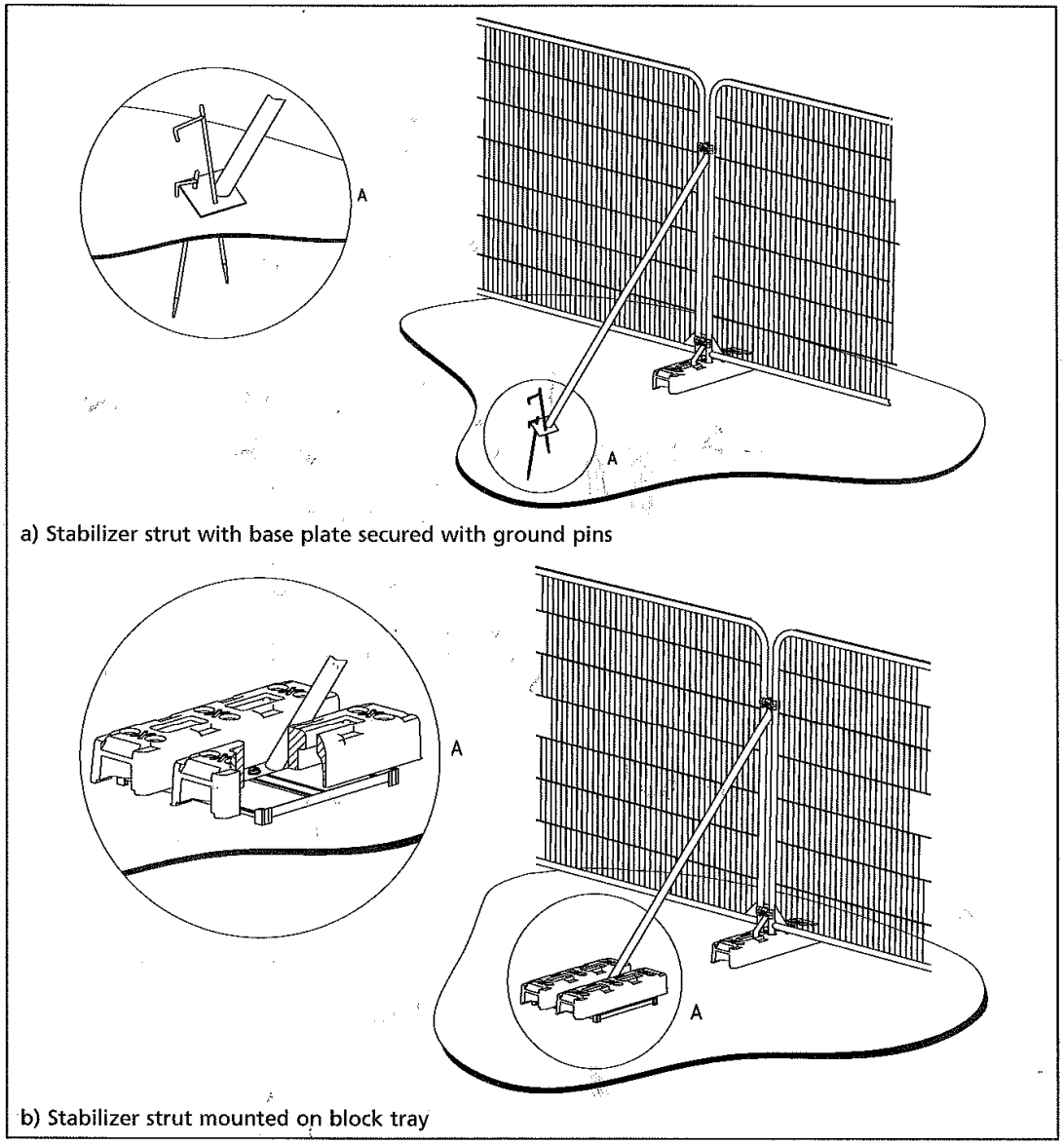
Tree Number	Tree Name (species)	Ht (m)	Calculated Stem Diameter (mm)	Number of Stems	Root Protection Area (Radius, m)	N (m)	E (m)	S (m)	W (m)	Age Class	Clearance (m)	Estimated life expectancy	BS Category	Comments / Recommendations
T1	Pear (willow leafed)	4	200	1	2.40	3	3	3	3	M	1.5	10-20	C1	Small tree of limited value. Recommend: to be removed.
T2	Whitebeam	8	430	1	5.16	4	4	4	4	M	4	20-40	B1	No notable defects recorded during inspection.
T3	Rowan	7	233	1	2.80	1	3	2	3	M	4	10-20	C1	Small tree of limited value.
T4	Apple	8	300	1	3.60	4	4	4	4	M	3	10-20	C1	Small tree of limited value. Recommend: to be removed.
T5	Lime	19	500	1	6.00	5	5	4	5	M	5.5	20-40	B2	Off site - full inspection not possible. Recommend: crown lift to 6m over site to allow safe site works under trees.
T6	Lime	8	100	1	1.20	2	3	2	3	M	3.5	20-40	B2	Off site - full inspection not possible. Recommend: crown lift to 6m over site to allow safe site works under trees.
T7	Lime	19	400	1	4.80	3	4	4	3	M	3	20-40	B2	Off site - full inspection not possible. Recommend: crown lift to 6m over site to allow safe site works under trees.
G8	Mixed broadleaves	6	100	1	1.20	2	2	2	2	MA	3	10-20	C2	Small trees of limited value.

Tree Number	Tree Name (species)	Ht (m)	Calculated Stem Diameter (mm)	Number of Stems	Root Protection Area (Radius, m)	N (m)	E (m)	S (m)	W (m)	Age Class	Clearance (m)	Estimated life expectancy	BS Category	Comments / Recommendations
T9	Lime	19	700	1	8.40	5	7	6	7	M	5 plus epicormic	20-40	B2	Off site - full inspection not possible. Recommend: crown lift to 6m over site to allow safe site works under trees.
T10	Cherry	3	150	1	1.80	4	2	1	4	M	2	10-20	C1	Small tree of limited value. Recommend: to be removed.

KEY :
Tree No: (T= individual tree, G= group of trees, W= woodland)
Age class: Young (Y), Middle aged (MA), Mature (M), Over mature (OM), Veteran (V)
Height (Ht): Measured in metres +/- 1m

Appendix C

Figure 3 **Examples of above-ground stabilizing systems**



Appendix D

Site Monitoring Sheet

Site:				
Project:				
Client:			**Contact:**	
Site monitoring inspection date:			Name of inspector:	
Notes:				
Action required to rectify any issues:				
Date Action taken:				
Site monitoring inspection date:			Name of inspector:	
Notes:				
Action required to rectify any issues:				
Date Action taken:				
Site monitoring inspection date:			Name of inspector:	
Notes:				
Action required to rectify any issues:				
Date Action taken:				