GHA trees
5 South Drive
High Wycombe
Bucks
HP13 6JU

t: 07884056025
e: glen@ghatrees.co.uk
www.ghatrees.co.uk

Glen Harding
TECH CERT (ARBOR. A)

Arboricultural and Planning Integration Report: 30 Frognall, London, NW3 6AG

21st November 2016

Ref: GHA/DS/14460:16

CONTENTS

Arboricultural Report

Location: 30 Frognall, London, NW3 6AG
Ref: GHA/DS/14460:16
Client: Nemanja Borjanovic
Date: 21st November 2016
Report Prepared by: Glen Harding Tech Cert (Arbor.A)
Date of Inspection: 19th November 2016

Please note that abbreviations introduced in [Square brackets] *may be used throughout the report.*

Instructions

Issued by – Nemanja Borjanovic

TERMS OF REFERENCE – GHA Trees were instructed to survey the subject trees within and adjacent to 30 Frognall, London, NW3 6AG, in order to assess their general condition and to provide a planning integration statement for the indicative proposed development that safeguards the long term well being of the retained trees in a sustainable manner.

Executive Summary

The proposal for the site is to extend the existing house and basement to the rear. The proposed scheme requires the removal of one small cherry tree, 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

Nemanja Borjanovic 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 trees 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 properties were surveyed from within the subject property, therefore a detailed assessment was not possible and some (if not all) measurements were estimated.

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

1.6 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)

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

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

1.9 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).

1.10 Where hard surfacing may be required in close proximity to trees, BS5837: 2012, and the principles of Arboricultural Practice Note 12: Through the Trees to Development (AAIS) 2007 (APN12) with regards to "no dig" surfacing will be employed.

1.11 Reference is made to the National House Building Council Standards, 2003, chapter 4.2: Building near trees (NHBC).

1.12 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.

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.

2.5 The stem diameters were 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. Where the crown radius was notably different in any direction this has been noted on the Plan (appendix A), or in the tree table (Appendix B).

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 in metres. 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. Please note that the attached plans are for indicative purposes only, and that the trees are plotted at approximate positions. 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.

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.

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 Frognall, a residential through road located in the Hampstead area of north west London.

The Subject Trees

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

4.2 The overall quality of the trees is good.

4.3 Of the three individual trees, and groups of trees surveyed, two have been assessed as BS 5837 category B, with the remaining tree being assessed as BS 5837 category C.

The Proposal

5.1 The proposal for the site is to extend the existing house and basement to the rear.

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

Arboricultural Impact Assessment

TREE REMOVAL / RETENTION:

6.1 T1 is proposed for removal as part of the new development, as this tree could not be effectively retained due to its position in relation to the new structure(s). This tree has been given a C category grading in accordance with BS 5837. It is therefore felt that it should not act as a limitation on the effective use of the site, or impose any significant constraints on the layout (see table 1 BS5837).

Below: T1 stem growing very close to existing retaining wall

TREE PRUNING TO ACCOMODATE THE PROPOSAL OR ACCESS TO THE SITE

6.2 The implementation of the proposal does not lead to the requirement to prune any of the retained trees, or shrubs.

ASSESSMENT OF RETAINED TREES ROOT PROTECTION AREAS

6.3 Section 4.6.3 of BS 5837: 2012 states that the Root Protection Area (RPA) of each tree should be assessed by an arboriculturalist considering the likely morphology and disposition of the roots, when known to be influenced by past or existing site conditions.

6.4 The proposed new building(s) are situated outside of the RPA's of all of the trees proposed for retention, therefore these trees pose no below ground constraints on the new buildings or vice versa.

Post Development Pressure

FUTURE TREE AND STRUCTURE RELATIONSHIPS

7.1 The retained trees are at a satisfactory distance from the proposed new building, and highly unlikely to give rise to any inconvenience.

7.2 Some minor lateral pruning of the retained trees and shrubs may be required in the medium term, however any such work would not have a significant impact on the health or amenity value of these trees.

7.3 The BS3998: 2010 – Recommendations for Tree Work discusses and endorses various methods of pruning that can alleviate the minor inconveniences trees can cause, whilst retaining them in a healthy condition. Methods such as crown reductions (section 13.4) partial or whole, crown lifting (section 13.5) and crown thinning (section 13.6) can be used to both increase light to properties, as well as improve clearances from buildings. Trees in towns are often sited in close proximity to buildings; however residents concerns can be readily appeased with the implementation of regular, well-planned, sensitive pruning.

7.4 Regular inspections of the retained trees by a suitably qualified Arboriculturalist and subsequent remedial works will ensure that the trees are maintained in a suitable manner, to exist in harmony with the new structures and its occupants for many years to come.

REMEDIATION / REPLACEMENT PLANTING AND SOFT / HARD LANDSCAPING

7.5 Any new trees that are planted should be selected to ensure they do not become a nuisance and that the level of routine maintenance is low.

7.6 The soil type may require the guidance of NHBC as far the building foundations are concerned. Clearly the planting schedule must be available to assist with foundation design, but any potential for subsidence damage in the future will be designed out.

7.7 All new pathways and soft landscaping areas within the Root Protection Areas (RPA's) of the retained trees should be designed using no-dig, up and over construction and in close co-ordination with the retained Arboriculturalist using porous materials.

Tree Protection Measures and Preliminary Method Statement for Development Works

8.1 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 proposed 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).

8.2 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 (or similar and fit for purpose) that shown in BS 5837 (see Appendix C).

The Fence must be marked with a clear sign reading:

"Construction Exclusion Zone – No Access".

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

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

8.4 MIXING OF CONCRETE

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

8.5 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.

8.6 INCOMING SERVICES AND SOAKAWAYS

The existing drainage system has been assessed as suitable for re-use, and it is assumed that the electric and gas cabling is also satisfactory. Any new underground services near to trees will however 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). When within the RPA of any retained tree, any new service trenches should be excavated using an airspade

to avoid any damage to roots. Care must then be taken to ensure the new services are installed so as to avoid any roots present.

8.7 ON SITE SUPERVISION

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.

8.8 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.

8.9 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.

8.10 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

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

9.2 There will be no appreciable post development pressure, and certainly none that would oblige the council to give consent to inappropriate tree works.

Recommendations

10.1 The site works should progress as follows to ensure the healthy retention of the trees.

a. Tree works, in accordance with BS3998
b. Installation of all tree protection measures.
c. Construction.
d. Soft landscaping.

10.2 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.

10.3 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.

21st November 2016
Signed:

Glen Harding
For and on behalf of GHA Trees

Appendix A

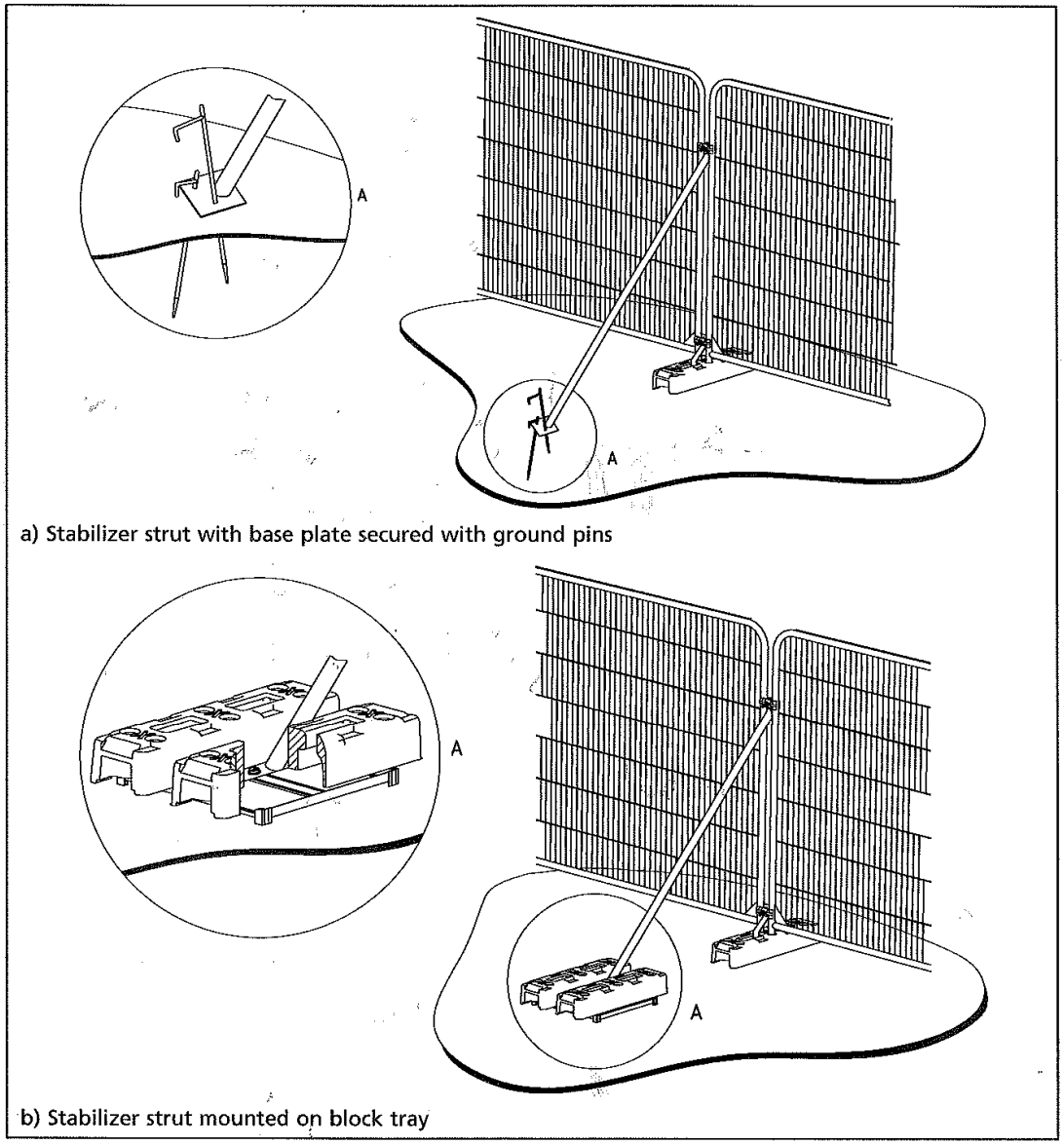
Appendix B

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	Cherry	12	250	1	3.00	4	4	4	4	MA	4	10-20	C1	Tree growing too close to wall and house. Recommend: tree to be removed.
G2	Lime	20+	500	1	6.00	7	7	7	7	M	8	20-40	B2	Off site tree - full inspection not possible.
T3	London Plane	20+	900	1	10.80	8	8	8	8	M	6	20-40	B2	Off site tree - full inspection not possible.

KEY :
Tree No: Tree number (T= individual tree, G= group of trees, W= woodland)
Crown = the leaf bearing part of the tree
Diameter: MS = Multi-stemmed
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**



a) Stabilizer strut with base plate secured with ground pins

b) Stabilizer strut mounted on block tray