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Arboricultural and Planning Integration Report: Salisbury Square, Hatfield, Hertfordshire

22nd November 2021

Ref: GHA/DS/122560:21

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Arboricultural Report

Location: Salisbury Square, Hatfield, Hertfordshire
Ref: GHA/DS/122560:21
Client: Brooks Murray
Date: 22nd November 2021
Prepared by: Glen Harding MICFor, MSc (Forestry), MArborA
Date of Inspection: 19th August 2021

Instructions

Issued by – Brooks Murray

TERMS OF REFERENCE – GHA Trees were instructed to survey the subject trees within and adjacent to Salisbury Square, Hatfield, Hertfordshire, 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.

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Executive Summary

The proposal for the site is to demolish some existing buildings and then construct new commercial and residential units. The existing site access will be reused for the new development with the parking being realigned within the site. 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 development presents an excellent opportunity to plant some new trees, to enhance the site and local area for the future. 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

The client supplied the following documents:

1. Topographical survey
2. Existing layout plans
3. Proposed layout 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 Tree 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 20 years. Colour = mid **blue** crown outline on plan.

Category C – Trees of low quality with an estimated remaining life expectancy of at least 10 to 20 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 realistically 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 at Salisbury Square, in the centre of Old Hatfield.

The Subject Trees

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

4.2 Please be aware that ash tree(s) were identified during the survey. Many ash trees in the UK are suffering from ‘ash dieback’ (*Hymenoscyphus fraxineus*) which can cause the rapid decline of affected trees, often rendering them unsafe. Affected trees have been highlighted in the tree table at appendix B and the severity of the infection noted; however please ensure these trees are inspected regularly.

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

Category B	2 trees / groups
Category C	16 trees / groups
Category U	1 tree

The Proposal

5.1 The proposal for the site is to demolish the existing buildings and then construct new commercial and residential units.

5.2 The existing site access will be reused for the new development with the parking being realigned within the site.

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

Arboricultural Impact Assessment

PROPOSED TREE REMOVAL / RETENTION:

- 6.1 The following trees are proposed for removal as part of the new development, as these specimens could not be effectively retained as they are located within the outline of the new structures, or located too close to make their retention feasible / sustainable.

T1, T2, T3, T4, T5, G12, T13, T14, T15, T16 and T17

- 6.2 All of the trees to be removed have been given either a C or U category grading in accordance with BS 5837. It is therefore felt that these trees 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).
- 6.3 The assessed grading (as per BS5837 table 1) of each of the trees to be removed, as well as any relevant comments on their condition can be seen in the tree table at appendix B.

TREE PRUNING TO ACCOMODATE THE PROPOSAL OR ACCESS TO THE SITE

- 6.4 T6 and G7 will be pruned to improve access to the site or facilitate improved access for site works. A full specification for the proposed pruning to each tree can be seen in the tree table at appendix B. This is work that would be desirable regardless of the proposals.
- 6.5 The implementation of the proposal does not lead to the requirement to prune any of the other retained trees, or shrubs.

ASSESSMENT OF RETAINED TREES ROOT PROTECTION AREAS

- 6.6 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.
- 6.7 The RPAs of some trees have been amended to take account of the existing structures; these adjustments can be seen on the appended plan.
- 6.8 The other RPAs have been drawn as notional circles, as there are no structures within their RPAs that have been assessed to significantly impact the root layout.

ASSESSED IMPACT ON RPAS BY PROPOSED STRUCTURES

- 6.9 The proposed new buildings are situated outside of the assessed RPA's of all of the trees proposed for retention, therefore these trees pose no below ground constraints on the new structures or vice versa.

PROPOSED ACCESS TO THE NEW DEVELOPMENT

- 6.10 Where sections of the new parking are within the RPA of T6, T10 and T11 an “up and over” style construction will be necessary, to ensure that all existing ground levels are retained in their current form, as well as ensuring that satisfactory moisture and oxygen can be obtained from the underlying soil by any tree roots in this area. A design for this proposed access route must be drawn up by a structural engineer, in close co-ordination with the retained arboriculturalist.

INSTALLATION OF SERVICES

- 6.11 The installation of underground apparatus and drainage systems with the use of mechanical excavators will undoubtedly sever any roots that may be present and can change the hydrology and structure of the nearby soil in a way that will adversely affect the health of any nearby trees. Particular care should therefore be taken when assessing the layout of new services and consideration **MUST** be given to the methods of installation of **ALL** underground apparatus.
- 6.12 New services should be routed to avoid all RPAs of retained trees on site and within nearby sites. From an assessment of the subject site, undertaken in conjunction with the project architect, there is no reason to assume this isn't possible. Inspection chambers must also be sited outside the RPAs of any nearby trees.

Post Development Pressure

FUTURE TREE AND STRUCTURE RELATIONSHIPS

- 7.1 The retained trees are at a satisfactory distance from the proposed new buildings and highly unlikely to give rise to any inconvenience.
- 7.2 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.

REMEDICATION / REPLACEMENT PLANTING AND SOFT / HARD LANDSCAPING

- 7.3 An assessment of suitable planting sites within the proposed development area confirms that the loss of trees discussed in section 6.1 can be addressed by the planting of new trees that would complement the existing landscape.
- 7.4 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.
- 7.5 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 WORK

A list of all tree works that are required (including trees to be removed) is included in the tree table at Appendix B. Where any tree work is needed, this work **MUST** 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. The position of the proposed protective fencing for the site is shown on the plan at Appendix A by a pink line. The position of the fence **MUST** be marked out with biodegradable marker paint on site and agreed with appropriate representatives from the LPA and contractor. The fencing **MUST** be erected **prior** to any works in the vicinity of the trees and removed only when all development activity is complete. The protective fencing **MUST** 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 **MUST** 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”

8.3 BOUNDARY TREATMENTS

Boundary fencing installation / upgrades **MUST** be undertaken as part of the soft landscaping phase and **MUST** be installed ONLY when all machinery that is on site for the main build has permanently left the site (NB. If needed, boundary fencing can also be installed prior to the commencement of site works, i.e.. before any machinery has been bought onto the site). Where sections of new / upgraded fencing are located within the RPA of ANY tree that is to be retained, this work **MUST** be undertaken by hand using hand tools only. The locations of the new fence upright posts will be finalised following trial digs to confirm there are no major (over 25mm) roots present; if any such roots are found, the location must be altered. If any smaller roots are found, these can be cut using sharp hand sharp tools to leave a ‘clean’ cut, in order to minimise the risk of infection by decay pathogens. The post holes within the RPAs should then be lined with plastic sheeting before any concrete or cement is placed into the hole, in order that there is no risk of leaching into the nearby soil as the mixture dries.

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

All site huts **MUST** be positioned outside of the retained trees RPA’s.

8.5 MIXING OF CONCRETE

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

8.6 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.

8.7 INCOMING SERVICES, DRAINAGE AND SOAKAWAYS

New services **MUST** be routed to avoid all RPAs of retained trees on site and within nearby sites. From an assessment of the subject site, undertaken in conjunction with the project architect, there is no reason to assume this isn't possible. Inspection chambers **MUST** be sited outside the RPA.

8.8 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 info@ghatrees.co.uk
TBC	Local authority Arboricultural Officer	TBC
TBC	Site manager	TBC

8.9 OTHER TREE PROTECTION PRECAUTIONS

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

8.10 HARD / SOFT LANDSCAPING NEAR RETAINED TREES

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

8.11 TREE PLANTING

Some proposed locations for new trees can be seen on the architect's plans. Any new trees should be of a minimum 14/16 cm girth and purchased from a reputable nursery. Tree planting should be undertaken between the months of November and March by a suitably experienced contractor. The scheme should include the implementation of an aftercare package to include: weed management, tree hydration, stake and tie maintenance, replacement of any failures, mulching and formative pruning.

8.12 DISMANTLING PROTECTIVE BARRIERS

Protective barriers must only be completely removed when all machinery, and equipment has left site.

Conclusion

- 9.1 In conclusion, no significant or important trees will be lost to facilitate the proposed scheme.
- 9.2 Subject to precautionary measures as detailed above, the proposal will not be injurious to trees to be retained.
- 9.3 New trees and shrubs can be planted following approval from the Local Planning Authority to ensure a sustainable tree stock for the future.

Recommendations

- 10.1 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.
- 10.2 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.

22nd November 2021

Signed:



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

Appendix A
TREE PLAN
(see separate PDF)

Appendix B
TREE TABLE

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	Silver birch	12	460	1	5.52	4	4	5	3.5	M	3	10-20	C1	Sparse crown. Tree reaching end of safe useful life. Recommend: to be removed.
T2	Silver birch	11	280	1	3.36	3.5	1.5	2	4	M	2	10-20	C1	Sparse and declining crown. Tree reaching end of safe useful life. Recommend: to be removed.
T3	Golden rain tree	5	358	2	4.30	4	3.5	4.5	5.5	M	2	10-20	C1	Small tree of limited value in the wider landscape. Recommend: to be removed.
T4	Lawson cypress	13	400	1	4.80	2.4	2.4	2.4	2.4	M	0.8	10-20	C1	No notable defects recorded during inspection. Recommend: to be removed.
T5	Lawson cypress	12	440	1	5.28	2.4	2.4	2.4	2.4	M	0.8	10-20	C1	No notable defects recorded during inspection. Recommend: to be removed.
T6	Magnolia	4	318	4	3.82	3.5	4	4	3.5	M	2	10-20	C1	Small tree of limited value in the wider landscape. Recommend: crown lift to 2.5m over site.
T7	Gleditsia	14	550	1	6.60	5.5	5	8.5	6	M	2	20-40	B2	No notable defects recorded during inspection. Recommend: crown lift to 4m over parking area.

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
T8	Norway maple	16	540	1	6.48	5.5	6.5	6.5	3.5	M	2, first branch 3	10-20	B1	No notable defects recorded during inspection.
T9	Norway maple	13	420	1	5.04	3.5	2.5	4	4.5	M	3 north, 2 south	10-20	C1	Major bark wound 0 to 2m west side of stem.
T10	Silver birch	10	200	1	2.40	3	3	3	3	M	3.5 west	10-20	C1	Off site - full inspection not possible. Some measurements estimated.
T11	Ash	9	350	1	4.20	4	4	4	4	M	2 west	10-20	C1	Off site - full inspection not possible. Some measurements estimated.
G12	Ash (sycamore and norway maple suckers at base)	12	350	1	4.20	3.5	3.5	3.5	3.5	M	4	10-20	C2	Early signs of Ash dieback noted. Recommend: to be removed.
T13	Norway maple	8	230	1	2.76	2.5	3	2	3	M	2	Less than 10	U	Major limb loss at 4m on south side. Recommend: to be removed.
T14	Norway maple	10	330	1	3.96	3	3.5	4	3.5	M	3	10-20	C2	Unremarkable tree. Species choice not appropriate for a car park. Recommend: to be removed.
T15	Norway maple	10	280	1	3.36	3	3.5	3	3	M	3	10-20	C2	Unremarkable tree. Species choice not appropriate for a car park. Recommend: to be removed.

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
T16	Norway maple	10	350	1	4.20	4	4.5	4	3.5	M	3	10-20	C2	Unremarkable tree. Species choice not appropriate for a car park. Recommend: to be removed.
T17	Norway maple	11	440	1	5.28	4	4	3	3.5	M	4.5	10-20	C2	Unremarkable tree. Species choice not appropriate for a car park. Recommend: to be removed.
T18	Cherry	5	180	1	2.16	2.5	2.5	2.5	2.5	M	3	10-20	C1	Off site - full inspection not possible. Some measurements estimated.
T19	Ash	11	240	1	2.88	4	4	4	4	M	5	10-20	C1	Off site - full inspection not possible. Some measurements estimated.

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
TREE FENCING DETAIL

Figure 3 Examples of above-ground stabilizing systems



