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BS5837:2012 TREE SURVEY AND ARBORICULTURAL IMPACT ASSESSMENT: Ladds Garden Centre, Bath Road, Hare Hatch, RG10 9SB

Dated: 28th July 2025

Our reference: GHA/DS/160923:25

CONTENTS

Arboricultural Impact Assessment

Location: 55 – 57 Wargrave Road, Twyford, Berkshire, RG10
Our reference: GHA/DS/160923:25
Client: Westbourne Homes
Dated: 28th July 2024
Prepared by: Glen Harding MICFor, MSc (Forestry), MArborA
Date of Inspection: 22nd July 2024

Instructions

Issued by – Westbourne Homes

TERMS OF REFERENCE – GHA Trees were instructed to survey the subject trees within and adjacent to Ladds Garden Centre, Bath Road, Hare Hatch, in order to assess their general condition and to provide a planning integration statement for the indicative proposed development that safeguards the long term wellbeing of the retained trees in a sustainable manner.

Executive Summary

The proposal for the site is to construct nineteen new residential units to replace the existing buildings. The proposed scheme requires the removal of a small number of relatively insignificant (C and U category) 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

The client supplied the following documents:

- Topographical survey
- Existing layout plans
- 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 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 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 Bath Road, to the east of Hare Hatch.

3.2 Access to the property is currently gained via a driveway to the front of the site.

The Subject Trees

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

4.2 Of the thirty-two individual trees and groups of trees surveyed, one has been assessed as BS 5837 category A, ten have been assessed as BS category B, nineteen have been assessed as BS category C with the remaining two trees being assessed as BS 5837 category U.

Category A	1 tree
Category B	10 trees / groups
Category C	19 trees / groups
Category U	2 trees

The Proposal

5.1 The proposal for the site is to construct nineteen new residential units to replace the existing buildings.

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

Arboricultural Impact Assessment

PROPOSED TREE REMOVAL:

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.

T15, T16, T17, G18, T19, G25, G26, G27, T28, T29, T30 and section of G31

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

6.5 There is no part of the new structure which will have tree canopies (from trees to be retained) overhanging it and the building works can progress safely without the need for any facilitation pruning.

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 assessed RPAs (excluding the RPAs of U category trees and those trees which are proposed for removal) can be seen on the appended plan where some have amended to take account of the existing structures.

6.8 The proposed new houses and internal roads / parking are situated outside of the assessed RPAs of all of the trees proposed for retention; therefore, these trees pose no below ground constraints on these new structures or vice versa.

6.9 Where sections of the new LAP are within the RPA of T2 of, porous materials must be used to ensure rainwater can penetrate the soil beneath the new patio. The play equipment will be installed with localised support posts, which will be positioned (following trial digs) to ensure that any significant roots (over 25mm) that are present in the area where the posts will sit. The above ground parts will be installed supported to these posts.

INSTALLATION OF SERVICES

6.10 The full details of existing and proposed new services have not been made available at the time of writing.

6.11 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 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.

REMEDIATION / REPLACEMENT PLANTING

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.

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 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 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.

8.7 ON SITE SUPERVISION

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

Key personnel:

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

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

Conclusion

9.1 In conclusion, the principal arboricultural features within the site can be retained and adequately protected during development activities.

9.2 No significant or important trees will be lost to facilitate the proposed scheme.

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

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.

28th July 2025
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	Sycamore	22	690	1	8.28	4.5	6.5	6	5	M	2 over site, first branch 6	20-40	B1	No significant / notable defects observed during inspection.
T2	Lime	29	840	1	10.08	5.5	5.5	4.5	2	M	2 over site, first branch 8	20-40	A1	No significant / notable defects observed during inspection.
G3	Pine	14	380	1	4.56	3	4.5	4	2	MA	2	20-40	B2	No significant / notable defects observed during inspection.
T4	Pine	11	390	1	4.68	4	2	5	3.5	MA	1.5	20-40	B1	No significant / notable defects observed during inspection.
T5	Pine	11	430	1	5.16	5	4	4.5	4	MA	1.5	20-40	B1	No significant / notable defects observed during inspection.
T6	Pine	11	280	1	3.36	2	3	3	2	MA	1.5	20-40	B1	No significant / notable defects observed during inspection.
G7	Ash	19	580	1	6.96	6.5	6.5	6.5	6.5	M	6	20-40	B2	Very early signs of Ash dieback noted. Minor crown dieback observed from ground level.
G8	Horse chestnut	12	320	1	3.84	4	4	4	4	M	2	20-40	B2	No significant / notable defects observed during inspection.

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
G10	Eucalyptus	2	50	1	0.60	1	1	1	1	M	1	10-20	C2	Small trees of limited value in the wider landscape.
T11	Hazel	8	438	30	5.26	4	4	4	4	M	4	10-20	C1	Small tree of limited value in the wider landscape.
T12	Sycamore	16	660	1	7.92	5	6	6	6	M	3 north	20-40	B1	No significant / notable defects observed during inspection.
G13	Horse chestnut	6 to 10	320	1	3.84	4	4	4	4	M	2	20-40	B2	No significant / notable defects observed during inspection.
T14	Hawthorn	6	170	1	2.04	1	1	3	3	M	2	10-20	C1	Suppressed tree of poor form.
T15	Sycamore	12	694	5	8.33	5	4	5	6	OM	4	Less than 10	U	Crown in decline - 50% dead. Ganoderma at base of tree - small bracket. Recommend: to be removed.
T16	Sycamore	16	560	1	6.72	4	4	5	4	OM	4	Less than 10	U	Crown in decline - 50% dead. Recommend: to be removed.
T17	Sycamore	12	390	1	4.68	5	4.5	4	1	OM	4	10-20	C1	Poor fork at 2m. Recommend: to be removed.
G18	Sycamore	8	150	1	1.80	2.5	2.5	2.5	2.5	M	4	10-20	C2	Scrub growth. Recommend: to be removed.

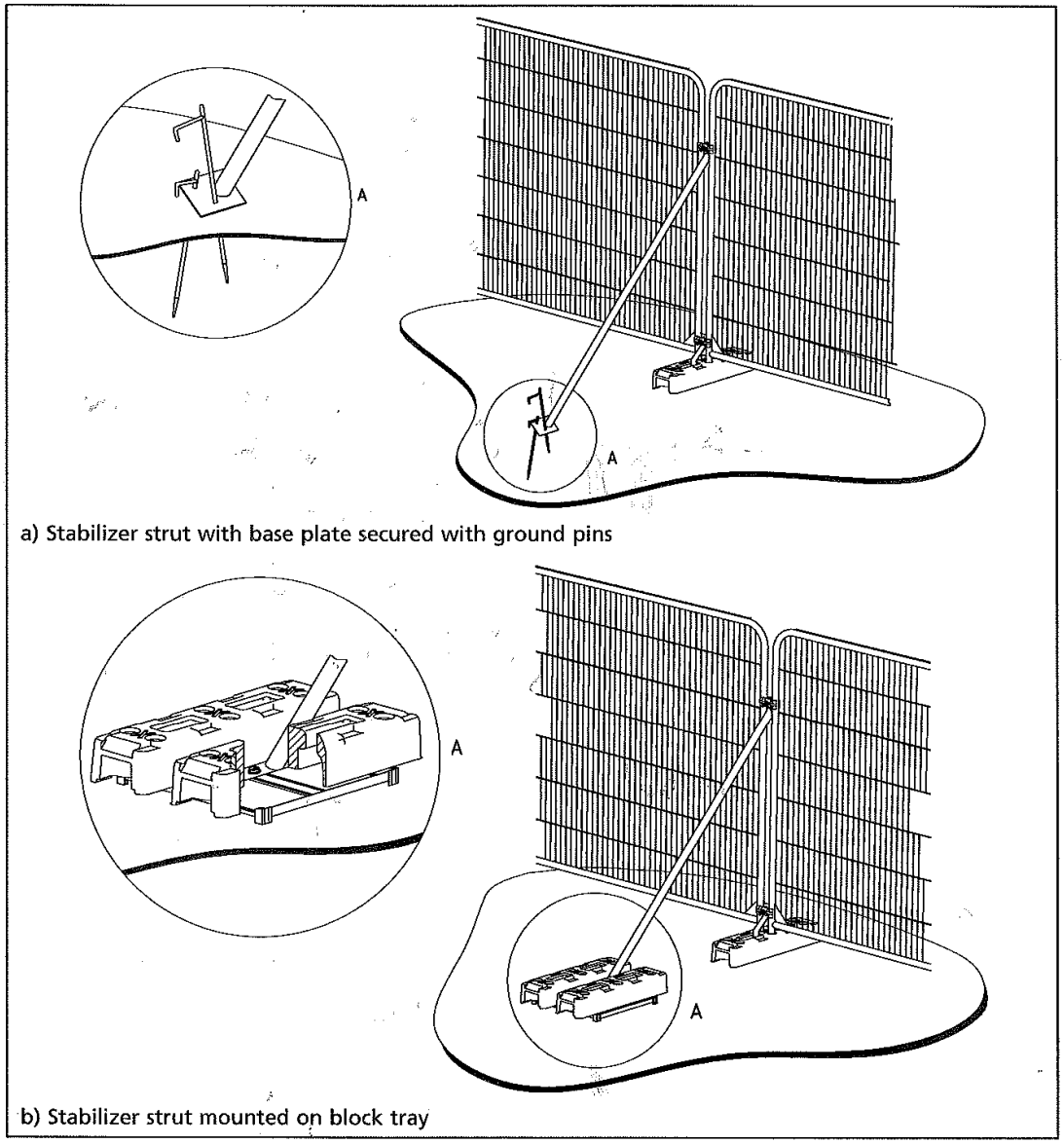
Tree Number	Tree Name (species)	Ht (m)	Calculated Stem Diameter (mm)	Number of Stems	Root Protection Area (Radius, m)	N (m)	E (m)	S (m)	W (m)	Age Class	Clearance (m)	Estimated life expectancy	BS Category	Comments / Recommendations
T20	Scrub / hedge - laurel, cypress, hawthorn, sycamore, willow, birch	4 to 8	100	1	1.20	AS TOPO				M	0	10-20	C1	Scrub growth.
T21	Cedar	7	100	1	1.20	0.5	2	2	1	MA	0	10-20	C2	Small tree of limited value in the wider landscape.
G22	Leyland cypress	20	480	1	5.76	5	5	5	5	M	2	10-20	C1	Lapsed hedge.
T23	Hornbeam	12	400	1	4.80	4	4	4	4		3	20-40	B1	Scrub growth.
G24	Willow and poplar scrub	8 to 12	200	1	2.40	3	3	3	3	M	2	10-20	C2	Scrub growth.
G25	Leyland cypress	14 to 19	560	1	6.72	4.5	4.5	4.5	4.5	M	2	10-20	C2	Lapsed hedge. Early signs of coryneum canker. Recommend: to be removed.
G26	Elm	10	250	1	3.00	2.5	2.5	2.5	2.5	M	3	10-20	C2	Scrub growth. Slightly sparse crown. Recommend: to be removed.
G27	Thuja plicata	10 to 18	280	1	3.36	3.5	3.5	3.5	3.5	M	2	10-20	C2	Lapsed hedge. 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
T29	Ash	17	210	1	2.52	1	2	2	1	M	4	10-20	C1	Early signs of Ash dieback noted. Minor crown dieback observed from ground level. Recommend: to be removed.
T30	Sycamore	18	450	2	5.40	1	5	5	5	M	6	10-20	C1	Recommend: to be removed.
T31	Sycamore	20	250	1	3.00	5	7	5	5	M	3 east	10-20	C1	No significant / notable defects observed during inspection. Recommend: section to be removed.
T32	Mixed cypress and thuja	16 to 18	250	1	3.00	2	2	2	2	M	0	10-20	C2	Lapsed hedge.

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**



a) Stabilizer strut with base plate secured with ground pins

b) Stabilizer strut mounted on block tray