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**BS5837:2012 TREE SURVEY AND
ARBORICULTURAL IMPACT ASSESSMENT:
Montrose House, Coronation Road, Ascot, SL5 9LP**

Dated: 18th September 2023

Our reference: GHA/DS/16550:23

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Arboricultural Impact Assessment

Location: Montrose House, Coronation Road, Ascot, SL5 9LP
Our reference: GHA/DS/16550:23
Client: Park Hood
Dated: 18th September 2023
Prepared by: Glen Harding MICFor, MSc (Forestry), MArborA
Date of Inspection: 30th August 2023

Instructions

Issued by –Park Hood

TERMS OF REFERENCE –GHA Trees were instructed to survey the subject trees within and adjacent to Montrose House, Coronation Road, Ascot, 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.

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Executive Summary

The proposal for the site is to construct a new detached dwelling following the demolition of the existing house. The existing site access points will be reused for the new development. The rear garden will also be relandscaped as part of the works. The proposed scheme requires the removal of a small number of trees and shrubs (most of which were approved for removal as part of a previously approved scheme); however, the development presents an excellent opportunity to plant some new trees, to enhance the site and local area for the future. Some minor pruning is proposed, this work is assessed to be minor and will not adversely impact the health or amenity value of the subject trees and is also work that would be desirable regardless of the proposals. The proposal requires new structures to be installed within the root protection areas of nearby trees; however, mitigations are proposed to ensure these structures will not adversely affect these trees. 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:

- ♣ 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 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.
- 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 on Coronation Road, a residential through road located to the south of Ascot.
- 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.
- 3.3 Access to the property is currently gained via a driveway to the front (east) 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 eighty-eight individual trees, and groups of trees surveyed, four have been assessed as BS 5837 category A, twenty-four have been assessed as BS category B, forty-eight have been assessed as BS category C with the remaining trees being assessed as BS 5837 category U.

Category A	4 trees
Category B	24 trees / group
Category C	48 trees / group
Category U	12 trees

The Proposal

- 5.1 The proposal for the site is to construct a new detached dwelling following the demolition of the existing house.
- 5.2 The existing site access points will be reused for the new development.
- 5.3 The rear garden will also be relandscaped as part of the works.
- 5.4 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 (most of the trees listed below were approved for removal as part of a previously approved scheme)

T4, T5, T6, T7, T8, T9, G10, T11, G12, S13, G14, G15, G16, T17, T19, T20, T21, T24, T26, T27, T28, T29, G30, G31, G32, T33, T34, T35, T36, T37, T38, T39, G40 and T88

- 6.2 The development presents an excellent opportunity to plant some new trees, to enhance the site and local area for the future.
- 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 There is a slight overhang of the new structure from the crown of T23. This tree will therefore be crown lifted to improve clearances from the proposed new structure.
- 6.5 The proposed tree work is assessed to be minor and will not adversely impact the health or amenity value of this tree. This is work that would be desirable regardless of the proposals.
- 6.6 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

- 6.7 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.
- 6.8 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.
- 6.9 The RPAs of several trees have been amended to take account of the existing structures; these adjustments can be seen on the appended plan.

ASSESSED IMPACT ON RPAS BY PROPOSED STRUCTURES

- 6.10 There is an encroachment into the RPAs of T2 (5%) and G3 (26%) for the new garage and T23 (12%) and G25 (10%) for the new house; thus, the use of

traditional strip foundations will not be acceptable as this would cause harm to these trees.

- 6.11 The use of systems employing mini piles in conjunction with ground beams will instead be used and is now widely accepted. The Abbey 'Treesafe' system is to be used, which has a proven track record in delivering 'root friendly' foundations and has been successfully used on a number of similar projects.

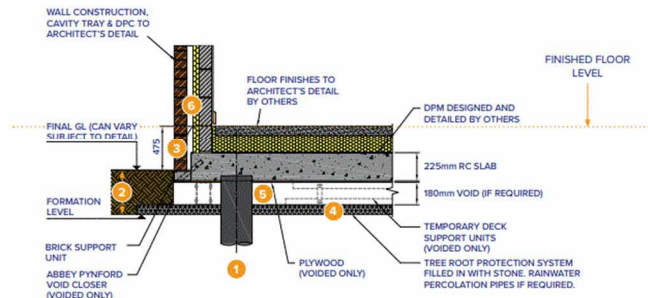


Treesafe is a version of our Housedeck ground floor solution. The system allows construction of dwellings or commercial structures close to or within tree root protection zones.

Treesafe utilises an open core working surface to support our lightweight piling rigs, minimising excavation that could potentially cause permanent damage to tree roots.

The Abbey Pynford benefits:

- 1 Allows construction of buildings within tree root protection zones.
- 2 Significant reduction in excavation.
- 3 Significant reduction in under build.
- 4 Open core deck system in place of piling mat.
- 5 Clear void to mitigate heave risk.
- 6 No venting required.



- 6.12 Localised piles will be positioned (following trial digs) to ensure that any significant roots (over 25mm) that are present in the area where the new building will sit can be retained and protected to coexist with the new structure.

- 6.13 In order to arrive at a suitable foundation design (which minimises root disturbance within the RPAs of nearby retained trees), site specific and specialist advice regarding footings should be sought from an Engineer, in close discussion with the projects Arboriculturalist.

- 6.14 The proposed new house and garage are situated outside of the assessed RPAs of all of the other 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

- 6.15 Where sections of the new driveway are within the RPAs of retained trees, a no-dig 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.

HARD LANDSCAPING IN RPAS

- 6.16 Where new landscaping is within the RPAs of retained trees, specialist 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. The Landscape Architects plan details the proposed methodology for any such structures.

INSTALLATION OF SERVICES

- 6.17 The full details of existing and proposed new services have not been made available at the time of writing.
- 6.18 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.
- 6.19 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.

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.

Tree Protection Measures and Preliminary Method Statement for Development Works

This is a preliminary statement outlining the principal tree protection measures that will be necessary to implement the scheme without adverse harm to trees to be retained. A full site-specific method statement will be required once the scheme is finalised and approved; this will be devised by GHA Trees, in conjunction with the appointed contractor and project engineer.

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 GROUND PROTECTION - VEHICULAR ACCESS WITHIN THE RPA

Where heavier vehicular access is required within the RPA, these areas MUST be covered using the Eve Trakway system (or a similar product) as shown in the photo below. Ground mats which will protect the ground can be lifted into place from the delivery lorry using the existing driveway or by placing the matting in place and then using this matting to protect the ground while the vehicle access parts of the site further from the drive.

eve

Trakway Systems

K Trakpanel



8.4 REMOVAL / DEMOLITION OF THE EXISTING STRUCTURES

Some existing structures located within the RPAs of retained trees will need to be removed.

METHODOLOGY:

The above ground parts of the structure **MUST** be removed by hand, using hand tools only (to include hand held pneumatic drill assuming compressor is positioned outside RPAs).

The removed material **MUST** be moved to and stored outside of the RPA of all of the retained trees. This can either be done by transporting small pieces by hand or using a machine to lift this material; any such machine **MUST** be parked outside the RPA of on appropriate ground protection.

The sub bases **MUST** be broken up using a small, lightweight “kango” drill into pieces that can be lifted by hand and removed.

If during the work, any roots from the retained trees are discovered in excess of 25mm, the retained arboriculturalist **MUST** be contacted immediately to assess the roots and arrange subsequent working methods that will cause no damage to the tree(s).

Care **MUST** be taken to avoid damage to the soil beneath these structures. If any roots are exposed, these should be covered immediately and the retained arboriculturalist **MUST** be contacted immediately to assess the roots and arrange subsequent working methods that will cause no damage to the tree(s).

8.5 IMPLEMENTATION OF THE NEW BUILDING ON A “RAFT STYLE” FOUNDATION WITH ASSOCIATED PILES / PADS

NOTE: any excavations in the RPAS 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.

The design of the new pile layout must have sufficient flexibility that the locations of the supporting piles is changeable. The location for these piles will be confirmed following hand excavated, trial digs of the top 1000mm of each potential hole (this is where the majority of roots exist).

The foundation design must also incorporate a void that will allow for water to reach the area beneath the structure and ensure that gaseous exchanges are not restricted.

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.

Any roots discovered in these trial pits in excess of 25mm diameter will immediately signal the requirement for a change of pit location.

These trial digs will be attended by the retained arboriculturalist and site manager who will agree the final locations of the piles / pads.

A piling mat of appropriate thickness / loading capability **MUST** be placed over the working area whilst the deeper piling of the final locations commences, with the use of a lightweight rig. This will alleviate the possibility of excessive compaction or erosion within the RPA's.

Once the trial holes are excavated to the correct depth, care must then be taken to ensure the new piles are installed so as to avoid any roots present. Any roots that require pruning (those less than 25mm diameter) should be cut using sharp tools to leave a 'clean' cut, in order to minimise the risk of infection by decay pathogens.

Once the piles are installed, the excavated holes **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.

The supporting beams can now be installed and must be raised above the ground level between the piles and no further excavation carried out.

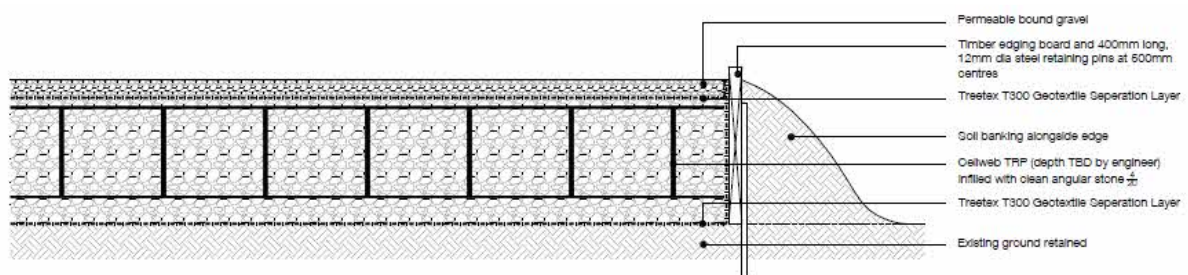
The beams between the piles will be precast or cast on site using a biodegradable void former. The slab will be cast between the beams using a biodegradable void former such as Clayboard or similar approved. The ground protection must remain in place until work is complete and there is no risk to the RPAs.

8.6 NO DIG SURFACING CONSTRUCTION METHOD IN ACCORDANCE ARBORICULTURAL PRACTICE NOTE 12 AND BS: 5837

The sections of the new driveway that are within the RPA's of the retained trees **MUST** be constructed as follows.

Below is a diagram detailing the makeup of the new drive and also a typical cross the installation methodology is included below this diagram.

No dig drive makeup



Typical section:



METHODOLOGY:

Eradication of all existing ground vegetation **MUST** be undertaken using a translocated herbicide. Any product used for this purpose **MUST** be selected to ensure that it will not have an adverse affect on the health of the retained trees, and carried out by a suitably trained operative.

Any major protrusions within the soil **MUST** be removed, such as large rocks or existing tree stumps. Any holes **MUST** be filled with sharp sand.

Lay a geotextile membrane over the entire area(s) to be protected, ensuring a one 1m overlap where necessary. All new surfacing **MUST** be positioned at least 500mm from tree stems or buttress roots.

Construction of the edging of the area is to be implemented with the use of vertical steel pegs driven into the ground at intervals of 500mm with side supports firmly attached. **CHECK FOR UNDERGROUND SERVICES PRIOR TO THE COMMENCEMENT OF SUCH WORK.**

The three dimensional cellular confinement system (e.g cellweb or similar) must be cut to size and placed within the pre-prepared area. This area **MUST** now be filled with a no-fines aggregate infill. This **MUST** then be compacted to avoid the possibility of future “rutting”.

Lay a final layer of the geotextile membrane on top of this surface.

A porous material can now be placed on top to complete the construction.

Graded top soil will be used to bring the adjacent grassed areas to the same level as the new driveway.

N.B. An engineer will prepare the exact specification in agreement with the retained Arboriculturalist.

8.7 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.

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

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

8.9 MIXING OF CONCRETE

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

8.10 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.

8.11 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.

8.12 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 02 Or info@ghatrees.co.uk
TBC	Local authority Arboricult Officer	TBC
TBC	Site manager	TBC

At this pre start meeting, a supervision programme MUST be devised by the site manager and retained Arboriculturalist, ensuring that Arboricultural supervision is present at the appropriate periods during construction. The critical phases as listed below will be supervised inspected on site by the retained Arboriculturalist. A photo record of each visit will also be kept and supplied to the local planning authority if requested. After this pre start meeting, day-to-day responsibility for tree protection will be devolved to the site manager who will make contact with the retained arboriculturalist as needed.

8.13 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.

8.14 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.

8.15 TREE PLANTING

Some proposed locations for new trees can be seen on the landscape architect's plans. 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.

8.16 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 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.

18th September 2023

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	Scots pine	25	620	1	7.44	3	5	5	3	M	10	20-40	B2	Off site - full inspection not possible. Some measurements estimated.
T2	Scots pine	25	620	1	7.44	3	5	5	3	M	10	20-40	B2	Off site - full inspection not possible. Some measurements estimated.
G3	Lawson cypress	27	450	1	5.40	2	4	4	4	M	9	20-40	B2	Off site - full inspection not possible. Some measurements estimated.
T4	Lawson cypress	18	220	1	2.64	1	1	1	1	M	4	Less than 10	U	Dead tree. Recommend: to be removed.
T5	Lawson cypress	18	320	1	3.84	1	1	1	1	M	4	Less than 10	U	Dead tree. Recommend: to be removed.
T6	Lawson cypress	18	480	1	5.76	4	2	3	4	M	4	10-20	C1	Topped at 4m in past. Low value tree. Recommend: to be removed.
T7	Lawson cypress	12	270	1	3.24	1	1	2	5	M	4	Less than 10	U	80% dead. Recommend: to be removed.
T8	Lawson cypress	18	270	1	3.24	2	2	2	2	M	2	10-20	C1	Too close to house, growing in retaining wall. Recommend: to be removed.
T9	Lawson cypress	20	440	1	5.28	2	2	1	2	M	0	10-20	C2	Too close to house. 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
G10	Lawson cypress	18	250	1	3.00	3	3	3	3	M	4	10-20	C2	Lapsed hedge. Recommend: to be removed.
T11	Oak	22	595	2	7.14	4	5	5	7	M	10	20-40	B1	Poor union to two stems at base. Recommend: to be removed.
G12	Lawson cypress	22	300	1	3.60	3	3	3	3	M	5	10-20	C2	Lapsed hedge. Recommend: to be removed.
S13	Amelanchier	8	161	2	1.93	5	1	1	4	OM	1	Less than 10	U	Dead tree. Recommend: to be removed.
G14	Lawson cypress	12 to 20	300	1	3.60	2.5	2.5	2.5	2.5	M	3 to 8	10-20	C2	Lapsed hedge. Recommend: to be removed.
G15	Lawson cypress	12 to 20	300	1	3.60	2.5	2.5	2.5	2.5	M	3 to 8	10-20	C2	Lapsed hedge. Recommend: to be removed.
G16	Lawson cypress	12 to 20	300	1	3.60	2.5	2.5	2.5	2.5	M	3 to 8	10-20	C2	Lapsed hedge. Recommend: to be removed.
T17	Silver birch	21	480	1	5.76	3	4	4	3	M	6	10-20	C1	Basal decay noted ground level south side. Crown in decline. Recommend: to be removed.
T18	Silver birch	21	520	1	6.24	5	4	5	4	M	4	10-20	C1	Ivy prevented full inspection. Recommend: remove ivy and reinspect. Sparse crown.

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
T19	Silver birch	18	370	1	4.44	4	3	2	3	M	10	10-20	C1	Crown in decline. Monitor. Recommend: to be removed.
T20	Silver birch	11	340	1	4.08	0	2	5	3	M	4	10-20	C1	Crown in decline. Monitor. Recommend: to be removed.
T21	Oak	9	320	1	3.84	1	2	4	2	M	2	10-20	C1	Too close to house. Topped in past.
G22	Lawson cypress	9	180	1	2.16	1	1	1	1	M	2	10-20	C2	Lapsed hedge.
T23	Lime	28	949	3	11.39	6	6	6	6	M	5	40+	A1	Vegetation near base of tree prevented full and detailed inspection.
T24	Plum	5	220	6	2.65	1	1	1	1	M	1	10-20	C1	Small tree of limited value in the wider landscape. Recommend: to be removed.
G25	Leyland cypress	16	400	1	4.80	4	4	4	4	M	4	10-20	C2	Lapsed hedge.
T26	Turkey oak	25	730	1	8.76	4	4	8	8	M	3	20-40	B1	No notable defects recorded during inspection. Recommend: to be removed.
T27	Magnolia	6	220	1	2.64	2	2	2	2	M	2.5	10-20	C1	Small tree of limited value in the wider landscape. 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
T28	Goat willow	16	485	3	5.82	5	3	2	5	M	5	Less than 10	U	Heavy lean to north. Nearby trees have failed. Recommend: to be removed.
T29	Lawson cypress	16	230	1	2.76	2	2	2	2	M	0	10-20	C1	Unremarkable tree of modest quality and of limited value in the wider landscape. Recommend: to be removed.
T30	Birch and willow	12	220	1	2.64	3	3	3	3	M	5	10-20	C2	Scrub growth. Recommend: to be removed.
G31	Laurel	5	150	1	1.80	2	2	2	2	M	1	10-20	C2	Hedge. Recommend: to be removed.
G32	Cypress and yew	4 to 8	120	1	1.44	2	2	2	2	M	0	20-40	B2	Small trees of limited value in the wider landscape. Recommend: to be removed.
T33	Goat willow	14	900	1	10.80	10	5	4	7	M	5	10-20	C1	Large tree damaging nearby wall. Recommend: to be removed.
T34	Scots pine	15	670	1	8.04	6	7	5	5	M	1	20-40	B1	Previous storm damage noted. Recommend: to be removed.
T35	Goat willow	12	233	2	2.80	5	1	1	1	M	8	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
T36	Goat willow	12	297	2	3.57	7	3	0	2	M	8	10-20	C2	Scrub growth. Recommend: to be removed.
T37	Goat willow	9	140	1	1.68	5	6	0	0	M	5	10-20	C2	Scrub growth. Recommend: to be removed.
T38	Silver birch	13	180	1	2.16	4	4	1	1	M	5	10-20	C2	Leans to north west. Recommend: to be removed.
T39	Spruce	16	480	1	5.76	5	5	3	3	M	2.5	20-40	B1	No notable defects recorded during inspection. Recommend: to be removed.
G40	Mixed group	10 to 18	200	1	2.40	3	2	2	2	M	2 to 10	10-20	C2	Scrub growth. Recommend: to be removed.
T41	Silver birch	15	350	1	4.20	4.5	4.5	4.5	4.5	M	8	20-40	B2	Off site - full inspection not possible. Some measurements estimated.
T42	Scots pine	20	400	1	4.80	3.5	3.5	3.5	3.5	M	11	20-40	B2	Off site - full inspection not possible. Some measurements estimated.
T43	Scots pine	20	250	1	3.00	2	2	0	1	M	10	10-20	C1	Off site - full inspection not possible. Some measurements estimated.

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
T44	Silver birch	20	354	2	4.24	4.5	4.5	4.5	4.5	M	6	20-40	B1	Off site - full inspection not possible. Some measurements estimated.
T45	Lawson cypress	18	430	1	5.16	2.5	2.5	1.5	1.5	M	4	Less than 10	U	Topped at 4m in past. Low value tree.
T46	Silver birch	20	350	1	4.20	4	4	4	4	M	8	10-20	C2	Unremarkable tree of modest quality and of limited value in the wider landscape.
G47	Lime and cypress	12 to 18	300	1	3.60	4	2	3	2	M	3	20-40	B2	No notable defects recorded during inspection.
T48	Silver birch	17	360	1	4.32	5	5	0	2	M	4	Less than 10	U	Dead tree
G49	Birch and oak	20	400	1	4.80	5	5	5	4	M	4	20-40	B2	Birch in group dead.
G50	Laurel, holly, oak	6	200	1	2.40	4	5	4	3	M	1	10-20	C2	Scrub growth.
T51	Silver birch	16	420	1	5.04	0	0	0	0	M	8	Less than 10	U	Dead tree
T52	Holly	9	180	1	2.16	1	1	1	1	M	2	10-20	C2	Small tree of limited value in the wider landscape.
T53	Turkey oak	24	650	1	7.80	6	6	6	6	M	12	10-20	C2	Crown in decline. Monitor.
T54	Douglas fir	25	750	1	9.00	6	6	6	6	M	10	40+	A1	Off site - full inspection not possible. Some measurements estimated.

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
T55	Douglas fir	20	400	1	4.80	3	2	3	4	M	10	20-40	B1	Off site - full inspection not possible. Some measurements estimated.
G56	Lawson cypress	20	300	1	3.60	3	3	3	3	M	3	10-20	C2	Lapsed hedge.
T57	Lime	12	420	1	5.04	5	5	5	5	M	3	20-40	B1	No notable defects recorded during inspection.
T58	Lawson cypress	16	410	1	4.92	2	2	2	2	M	2	10-20	C1	Unremarkable tree of modest quality and of limited value in the wider landscape.
T59	Oak	13	470	1	5.64	5	6	5	4	M	5	10-20	C1	Unremarkable tree of modest quality and of limited value in the wider landscape.
T60	Silver birch	20	290	1	3.48	0	3	6	2	M	5	10-20	C1	Unremarkable tree of modest quality and of limited value in the wider landscape.
T61	Silver birch	18	260	1	3.12	3	3	3	3	M	5	10-20	C1	Unremarkable tree of modest quality and of limited value in the wider landscape.
T62	Turkey oak	22	520	1	6.24	6	6	4	6	M	10	20-40	B2	No notable defects recorded 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
T63	Scots pine	22	480	1	5.76	1	3	4	4	M	14	20-40	B2	No notable defects recorded during inspection.
T64	Scots pine	24	700	1	8.40	5	7	5	5	M	10	20-40	B2	No notable defects recorded during inspection.
T65	Lawson cypress	10	260	1	3.12	2	2	3	2	M	2.5	10-20	C1	Unremarkable tree of modest quality and of limited value in the wider landscape.
T66	Laurel	6	100	1	1.20	1.5	1.5	1.5	1.5	M	0	10-20	C2	Hedge.
T67	Sweet chestnut	16	340	1	4.08	2	7	6	2	M	5	20-40	B2	No notable defects recorded during inspection.
T68	Silver birch	22	524	2	6.29	3	4	5	5	M	8	10-20	C2	Unremarkable tree of modest quality and of limited value in the wider landscape.
T69	Purple leaf plum	5	28	2	0.34	1	1	1	1	M	1	Less than 10	U	Regrowth from old stump.
T70	Turkey oak	12	559	5	6.71	3	7	6	6	M	3	20-40	B2	No notable defects recorded during inspection.
T71	Cherry	8	173	3	2.08	2	0	3	4	M	2	10-20	C2	Small tree of limited value in the wider landscape.
T72	Turkey oak	15	250	1	3.00	3	2	1	2	M	2	20-40	B2	No notable defects recorded 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
T73	Lawson cypress	11	200	1	2.40	2	2	2	2	M	1.5	10-20	C1	Unremarkable tree of modest quality and of limited value in the wider landscape.
T74	Silver birch	16	439	3	5.26	4	5	4	2	M	8	Less than 10	U	Crown in decline.
T75	Silver birch	18	260	1	3.12	2	2	2	2	M	10	Less than 10	U	Crown in decline.
T76	Lawson cypress	16	300	1	3.60	2	2	2	2	M	2	10-20	C2	Unremarkable tree of modest quality and of limited value in the wider landscape.
T77	Scots pine	22	580	1	6.96	5	5	5	5	M	12	40+	A1	No notable defects recorded during inspection.
T78	Lawson cypress	16	300	1	3.60	4	4	4	4	M	2	10-20	C2	Unremarkable tree of modest quality and of limited value in the wider landscape.
T79	Silver birch	Gone since last survey												
G80	Birch, chestnut, holly	12	350	1	4.20	4	4	4	4	M	3	20-40	B2	Scrub growth.
T81	Lawson cypress	12	260	1	3.12	2	2	2	2	M	2	20-40	B2	No notable defects recorded during inspection.
T82	Silver birch	16	300	1	3.60	5	2	1	4	M	4	10-20	C2	Scrub growth.
T83	Silver birch	16	300	1	3.60	5	2	1	4	M	4	10-20	C2	Scrub growth.
T84	Silver birch	13	200	1	2.40	5	2	1	4	M	2	10-20	C1	Scrub growth.

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
T85	Silver birch	13	230	1	2.76	4	4	2	3	M	2	20-40	B1	No notable defects recorded during inspection.
T86	Scots pine	23	750	1	9.00	5	5	5	5	M	0	40+	A1	No notable defects recorded during inspection.
T87	Turkey oak	12	200	1	2.40	3	4	3	2	M	6	10-20	C1	Small tree of limited value in the wider landscape.
T88	Rowan	5	110	1	1.32	3	2	1	1	M	2	10-20	C1	Small tree of limited value in the wider landscape. 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
TREE FENCING DETAIL

Figure 3 Examples of above-ground stabilizing systems

