Arboricultural Impact Assessment BS5837:2012

26 Wellesbourne Road, Barford, CV35 8EL

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Contact details

Client	Address	26 Wellesbourne Road, Barford, CV35 8EL
	Name	Mr A Aujla
	Contact	
Architect	Company	Lapworth Architects
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	Contact	
	Email	

Report History					
Version	Date	Author	Checked by	Reason	Status
0.1	04/03/2022	RJH	RJH	Approval	Draft
A	04/03/2022	RJH	RJH	Submission	Final

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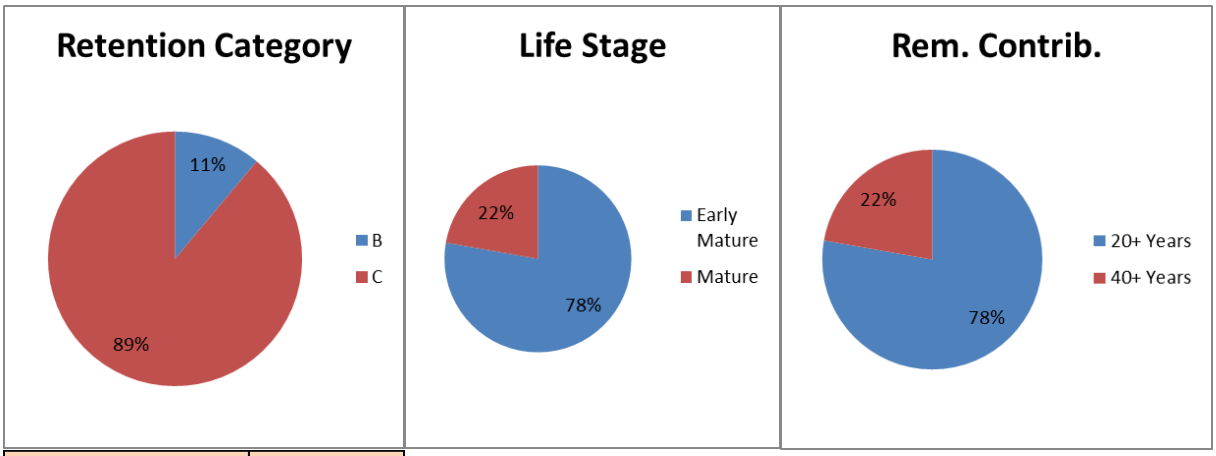
1. Summary

1.1 Outline of proposal

Additions to existing property to include small extension to front and rear extension and reconfigure of internal space.

1.2 Summary of trees



Common Name	No. trees
Apple	2
Blue Cedar	1
Common Holly	2
Lawson Cypress	9
Leyland Cypress	2
Magnolia	1
Winter-Flowering Cher	1

1.3 Works required

Tree reference number	Species	Category grading	Works required	For Development	For Arboriculture
H11	Common Holly x2 *(Ilex aquifolium)* Lawson Cypress x3 *(Chamaecyparis lawsoniana)*	C1	Cut back 1500mm of hedge	Yes	

2. Particulars of instruction

2.1 This report has been prepared to discharge the instruction of the client, Mr Aujla 'The Client' in respect of detailed planning permission at 26 Wellesbourne Road, Barford, CV35 8EL

2.2 The Client has commissioned a tree survey in compliance with *BS5837:2012 – Trees in relation to design, demolition and construction – Recommendations* to prepare a tree survey, Arboricultural Constraints Assessment, Arboricultural Impact Assessment, Tree Protection Plan and heads and terms of a Method Statement for the trees at the site.

2.3 The site survey was carried out on the 1st March 2022. The relevant qualitative and quantitative tree data and information was recorded to assess the condition of the trees and their constraints upon the proposed development and to provide a summary of any proposed protection and construction specification required.

2.4 I have based this report on my site observations and the information I have been provided with, and I have come to conclusions in the light of my experience as an arboriculturist. I include a summary of my experience and qualifications in Appendix V.

2.5 All information given is in accordance with *BS5837:2012 – Trees in relation to design, demolition and construction – Recommendations*.

I. Identification of tree by number value (collates with the associated plans)

II. Common tree species

III. Height (m)

IV. Stem diameter (mm) at 1.5m above ground using a DBH tape (or as per BS5837 fig C.1)

V. Branch spread to the four cardinal points (m)

VI. Existing height above ground of first branch and direction (m)

VII. Existing height above ground of canopy (m)

VIII. Life stage (Young, Semi Mature, Early Mature, Mature, Over Mature)

IX. Estimated remaining contribution (yrs) <10, 10+, 20+, 40+

X. General observations, condition and preliminary management recommendations, physical condition and structural defects

XI. Category (as per BS5837 Table 1)

XII. Root Protection Area (RPA) radius (m)

XIII. Root Protection Area (RPA) m²

3. Caveats

This advice and all appendices are subject to the following caveats:

3.1. This report is nullified if any remedial works are undertaken on any area of the site, on or after the date of study/survey.

3.2. The report is only valid on the date on inspection and any deletion, editing or alteration will void it in its entirety.

3.3. Apex Environmental Ltd does not assume responsibility for any works undertaken on the basis of the recommendations in this report or for any legal matters that may arise as a consequence.

3.4. The report is not valid in adverse or unpredictable weather conditions or for any failure due to *force majeure*.

3.5. Apex Environmental Ltd does not assume liability for any misuse, misinterpretation or misrepresentation of information contained in this report.

3.6. This report has been compiled using only the information made available to the author at the date of inspection.

3.7. Unless described as 'detailed', this assessment is of a preliminary nature. It was conducted from ground only, the tree(s) were not climbed or inspected below ground level (including roots). There was no use of decay detection equipment, and only basic surveying instruments were used.

3.8. At the time of writing, the author did not have any information as to the integrity of the main structure, its annexes or the drainage system.

3.9. Water supply/drainage systems, if damaged, can allow roots to penetrate. However, if the system is sound, or after repair, roots have little capacity to access/damage underground services.

3.10. Any doubt as to the structural condition of properties on site would require the advice of a structural engineer.

4. Scope of report

4.1 The aim of this report is to give guidance under *BS5837:2012 – Trees in relation to design, demolition and construction – Recommendations*. This will help to facilitate a harmonious and sustainable situation and long-term development.

4.2 The report will identify the value and quality of the woody vegetation on and within impacting distance of the site. All data gathered will be used to identify and address the impact that vegetation will have on the proposed development and the impact the development will have on the vegetation.

5. Documents supplied

Document title	Document Ref	Format	By whom	Date given
Working file	2731 REV G	DWG	Architect	17/02/2022

6. Legal and policy information

6.1. Tree Protection

Protection	Status	Comments
Tree Preservation Order	No	Check from online service
Conservation Area	Yes	Check from online service
Other		

6.2. Wildlife protection

Under the Wildlife & Countryside Act 1981 and the Countryside and Rights of Way Act 2000, it is a criminal offence under normal circumstances to disturb or destroy – whether intentional or unintentional - the nesting sites of wild birds or the roost sites of bats. You should therefore avoid carrying out significant tree works during the bird nesting season [mid- March to end of July], and you should ensure that trees are professionally surveyed for signs of bat roosts and/or bat activity before starting any tree work. Further advice on protected species can be obtained from the local office of Natural England.

6.3. Felling licence

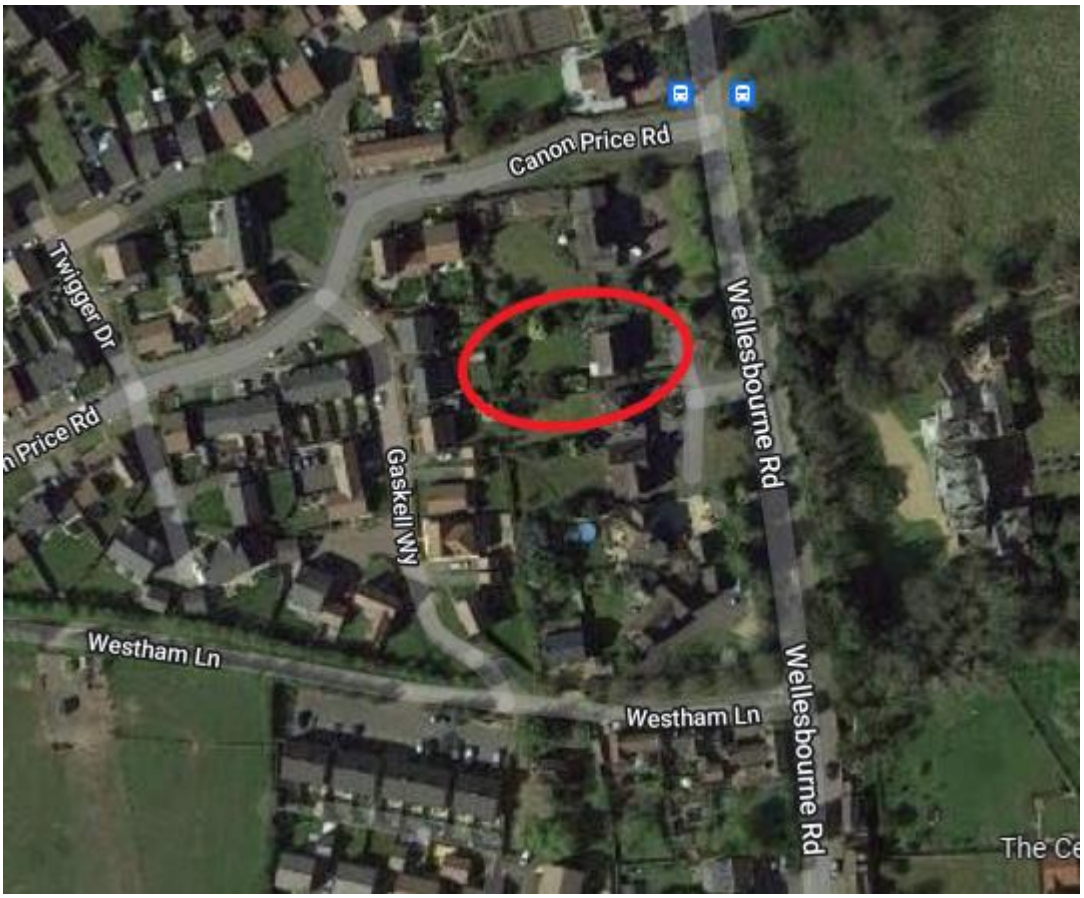
Tree felling can also be restricted under the Forestry Act 1967. Under this act, there is an exemption from the need for a felling licence for 'Felling necessary for the prevention of danger or the prevention or abatement of a nuisance'.

If full planning consent is granted for the current proposal, then any trees that need to be felled in order to implement the approved plans are exempt from this statutory protection. It should also be considered that any proposed tree works detailed in the tree schedule are also implemented as part of the planning decision consent.

7. Site description

7.1 The site is a detached property with a detached garage to the side. The property is screen from the main road by a brick wall and the property is not visible. There is an in out drive to the front and a rear garden laid mainly to lawn.

7.2 The site location is shown in red.



Source: *www.google.com*

7.3 Soil assessment

The assessment determines whether the soil is shrinkable. If it is, trees and other vegetation have the potential to cause indirect damage to structures. In such cases, further assessments should be carried out and the design of foundations should be considered by a structural engineer.

No information has been supplied on the soil assessment, details of which will need to be obtained and passed to the arboricultural consultant and structural engineer before the submission of any Arboricultural Method Statement.

7.4 Trees surveyed

There is a total of 10 trees and 1 hedge has been inspected. This report has only listed the trees in connection to the main development on the site. There are other trees on the site which are not affected by the development; these have been excluded.

8. Tree and vegetation findings

8.1 The tree survey has been carried out in accordance with *BS5837:2012 – Trees in relation to design, demolition and construction – Recommendations*, Section 4.4.

8.2 Tree categorisation method

The purpose of this method is to identify the quality and value of the existing tree stock, allowing informed decisions to be made about which trees should be removed or retrained in the event of development occurring.

A full tree survey has been included in appendix I.

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.

Category C – Trees of low quality with an estimated remaining life expectancy of at least 10 years, or young trees with a stem diameter below 150mm.

Category B – Trees of moderate quality with an estimated remaining life expectancy of at least 20 years.

Category A – Trees of high quality with an estimated remaining life expectancy of at least 40 years.

8.3 Any works with regards to the overall application have been listed in this report.

8.4 Findings

Young	Semi Mature	Middle Aged	Early Mature	Mature	Over Mature	Dead	TOTAL
			14	4			18

A	B	C	U
	2	16	

Review of trees on site

Ref.	Species	General Observations	Retention Category
H11	Common Holly x2 *(Ilex aquifolium)* Lawson Cypress x3 *(Chamaecyparis lawsoniana)*	Hedge to side on clients land	C1
T01	Lawson Cypress *(Chamaecyparis lawsoniana)*	On boundary possibly causing damage to wall and pavement.	C1
T02	Leyland Cypress *(Cupressocyparis leylandii X)*	Garden feature tree that has been pruned to a shape	C1
T03	Lawson Cypress *(Chamaecyparis lawsoniana)*	Garden feature which has been pruned in to a feature	C1
T04	Lawson Cypress *(Chamaecyparis lawsoniana)*	Garden feature which has been pruned in to a feature	C1
T05	Leyland Cypress *(Cupressocyparis leylandii X)*	Garden feature which has been pruned in to a feature	C1
T06	Lawson Cypress *(Chamaecyparis lawsoniana)*	Garden feature which has been pruned in to a feature	C1

T07	Lawson Cypress *(Chamaecyparis lawsoniana)*	Garden feature which has been pruned in to a feature	C1
T08	Apple *(Malus sp.)*	Fruit tree has been pollard in past to contain growth	C1
T09	Apple *(Malus sp.)*	Fruit tree has been pollard in past to contain growth	C1
T10	Winter-Flowering Cherry *(Prunus subhirtella)*	Neighbouring tree	C1
T12	Blue Cedar *(Cedrus atlantica glauca)*	3rd party land no overhang, has been topped in past looks like due to storm damage	B1
T13	Lawson Cypress *(Chamaecyparis lawsoniana)*	1m from kerb canopy over driveway	B1
T14	Magnolia *(Magnolia sp.)*	Formal tree which has been pruned to a shape	C1

Tree works due to arboricultural concerns

9. Constraints posed by existing trees

The RPA and category of the trees retained on site are listed within the Tree Constraints Plan. This information is taken from above-ground site observations. Inspection chambers or other features that may hinder direct root growth have been indicated within the plan, and the indicated RPA has been amended as per *BS5837:2012 – Trees in relation to design, demolition and construction – Recommendations,* Section 5.2.1.

Further constraints imposed by trees include:

- Current and ultimate height and spread of tree(s).
- Species characteristic, including canopy type, density of foliage and species susceptibility to external factors such as honey dew, branch drop and fruit fall.
- Shading on property and gardens, or excessive light to rooms (as indicated within the Tree Shadow Plan).
- The presence of Tree Preservation Orders and the presence of Conservation Areas or other regulatory protection.
- Potential incompatibilities between the layout and trees.
- Working and access space needed for the construction of the proposed development. This might involve assess facilitation pruning, or the use of a height restriction to prohibit tall vehicles accessing a site containing trees with low canopies.
- The effect that construction requirements might have on the amenity value of trees, both on and near the site, including the effects of pruning to facilitate access and working space.
- The requirement to protect the overhanging canopies of trees where they could be damaged by machinery, vehicles, barriers or scaffolding, where it will be necessary to increase the extent of the tree protection barriers to contain the canopy.

- Infrastructure requirements in relation to trees, e.g. easements for underground or above-ground apparatus, highway safety and visibility splays, and other infrastructural provisions, such as substations, refuse stores, lighting, signage, solar collectors, satellite dishes and CCTV sightlines.

- The proposed end use of the space adjacent to retained trees.

- The potential for new planting to provide mitigation for any losses.

10. Arboricultural Impact Assessment

10.1 Amenity value of the trees on site

The trees are not easily seen from the main road and the species are not of any merit. Collectively the trees form an interest within the garden.

10.2 Facilitation works

It will be necessary to cut back the hedge H11 and this may result in one of the stems being removed. The hedge is within the clients' garden and not seen from the road. The removal would not have a detrimental effect on the surrounding area.

10.3 Storage of materials, siting of welfare units and contractor parking

The tree protection plan has located all the necessary tree protection fencing. This is mainly to the garden section and also includes a location for the storage of materials to the back. Contractors parking can be located to the front and welfare will be in the existing garage or to the front of the house on the existing hardstanding.

10.4 Background to incursions between layout (foundations) and the trees for retention

The default position should be that structures are located outside of the RPA of trees to be retained. However, where there is an overriding justification for construction within the RPA, technical solutions might be available that prevent damage to the tree(s), as per *BS5837:2012 – Trees in relation to design, demolition and construction – Recommendations,* Section 5.3.1.

It should be demonstrated that the tree(s) can remain viable and that the area lost to encroachment can be compensated for elsewhere, contiguous with its RPA, and that a series of mitigation measures to improve the soil environment that is used by the tree for growth can be implemented.

On this basis and under previous BS5837 standards, it is sometimes acceptable to allow for encroachment of up to 10%. It should be possible to have viable grow areas on the other sides of the RPA which exceed 20%, thus compensating for the loss of viable

rooting area. It would also be possible to carry out decomposition to the soils and add minerals and nutrients to aid root development in the viable areas.

10.5 Background to incursions between layout (drives, parking areas, paths, landscaping) and the trees for retention

Where permanent hard surfacing within the RPA is considered unavoidable, site-specific and specialist arboricultural and construction design advice should be sought to determine whether it is achievable without significant adverse impact on the trees.

The design should not require excavation into the soil, including through lowering of levels and or scraping, other than the removal, using hand tools, of any turf layer or other vegetation.

The structure of the hard surface should be designed to avoid localised compaction by evenly distributing the load.

New permanent hard surfacing should not exceed 20% of any existing unsurfaced ground within the RPA.

In order to maintain the soil volume moisture, the surface should be of permeable hard material (unless there is a risk of water logging of soils). The design should incorporate a three-dimensional design such as 'no-dig' Cell Web. Any 'no-dig' specification has been included within the Tree Protection Plan.

10.6 Understanding foundation techniques

The use of tradition strip footings can result in extensive root loss and should be avoided within the RPA. Specially engineered structures within RPAs should be justified if this enables the retention of good quality trees such as category A and B.

Root damage can be minimised by using piles, with site investigations used to determine their optimal location (avoiding damage to roots important for the stability of the tree). This should be carried out to a minimum depth of 600mm and can be undertaken either by hand tools or compressed air soil displacement.

The piles should be the smallest practical pile diameter to reduce the possibility of striking major tree roots. This also reduces the size of the rig requirements. When

selecting the pile type, the need to protect the soil and adjacent roots from the potentially toxic effects of uncured concrete should be considered.

The beams should be laid at or above ground level and cantilevered as necessary to avoid tree roots identified by site investigations.

Following any approval decision, details and specifications will be included within a full Arboricultural Method Statement.

Where a slab for a minor structure such as sheds or garden rooms is to be formed within the RPA, it should bear on existing ground level and should not exceed an area greater than 20% of the existing unsurfaced ground.

10.7 Incursions on this project

Tree reference number	Species	Category grading	RPA m²	Building Incursion (m²)	TOTAL %	Significance	Comments
H11	Common Holly x2 *(Ilex aquifolium)* Lawson Cypress x3 *(Chamaecyparis lawsoniana)*	C1	17	1	5.8	Insignificant	The root incursion is minimal and not deemed harmful to the tree, however, given its location a section of the hedge is proposed to be removed.

10.8 Potential tree removal to facilitate the development

It will be necessary to cut back the hedge by 1500mm and this may result in one stem of the hedge being removed.

10.9 Inclusion of new infrastructure requirements

All new services will be routed back to the existing within the house and there will be no requirements for new services to be included.

10.10 Mitigation of tree loss and new planting

It will not be necessary to include any new tree planting for this scheme.

10.11 Canopy issues on the new development

Shading of buildings by trees can be a problem, particularly where there are rooms that require natural light such as living rooms, conservatories and kitchens with dining areas. The proposal should take the existing trees and their ultimate size and canopy density into account. Open spaces such as gardens and sitting areas should be designed to meet the normal requirement for direct sunlight for at least a part of the day.

10.12 Tree works

Tree reference number	Species	Category grading	Works required	For Development	For Arboriculture
H11	Common Holly x2 *(Ilex aquifolium)* Lawson Cypress x3 *(Chamaecyparis lawsoniana)*	C1	Cut back 1500mm of hedge	Yes	

10.13 Potential for future direct damage

There will be no future direct damage issues.

10.14 Future seasonal nuisances

There should be no future seasonal nuisance issues to the extensions due to the species of tree.

11. Concluding statement

Having appraised the proposals and balanced the Standard's thinking with the will of our client's proposals, the author of this report can fully support this application. (Reason): all reasonable concerns have been satisfied to the fullest standard.

This concludes the report. If I can be of further assistance, please do not hesitate to contact me.

Signature:  Date: 4th March 2022

Reuben Hayes M.Arbor.A; CMgr MCMI
Managing Director for and on behalf of Apex Environmental Limited

12. Heads and terms of Arboricultural Method Statement

12.1 Tree Protection Plan

The Tree Protection Plan has been produced in accordance with *BS5837:2012 – Trees in relation to design, demolition and construction – Recommendations,* Section 5.5. The plan has indicated the location of protection barriers to be erected, which will form the construction exclusion zone around the retained trees. It also shows the extent and type of ground protection, where necessary. All measurements for the protective fencing and temporary access within the construction exclusion zone have been indicated. Other considerations included are site construction access, contractors' car parking and storage areas.

12.2 Phasing of onsite works

The phasing of the works will take place as follows:

a. Pre-contract meeting
b. Tree works
c. Installation of tree protection fencing
d. Installation of temporary ground protection
e. Siting of welfare units and storage of materials
f. Demolition of existing structures
g. Construction in proximity to existing trees
h. Undertaking and completing construction works
i. Undertaking external landscape works to areas outside of the tree protection fencing
j. Removal of tree protection fencing
k. Undertaking external landscaping works within the tree protection fencing area
l. Sign off from the construction company and arboricultural consultant (no further involvement is required)

13. Arboricultural terms

13.1 An 'arboriculturist' is a person who has, through relevant education, training and experience, gained recognized qualifications and expertise in the field of trees.

13.2 A 'competent person' is someone who has had training and experience relevant to the matter being addressed and an understanding of the requirements of the particular task in question. A competent person is expected to be able to advise on the best means by which the recommendations of *BS5837:2012 – Trees in relation to design, demolition and construction – Recommendations* may be implemented.

13.3 A 'tree survey' in the context of planning and development is taken to mean an assessment of the tree stock on site (or within the area shown where appropriate), as individuals or groups. (This is undertaken independent of and prior to any knowledge of a scheme being produced). Management recommendations in the tree survey schedule reflect the structural and physiological condition of the trees only. It is essential that the trees are assessed objectively and without reference to site layout proposals.

13.4 The 'construction' is a site-based operation with the potential to affect existing trees.

13.5 A 'Root Protection Area', or 'RPA', is a layout design tool indicating the minimum area around a tree deemed to contain sufficient roots and rooting volume to maintain the tree's viability, and where the protection of the roots and soil structure is treated as a priority. The RPA area is worked out on a mathematical basis. It is listed in appendix III

13.6 'Construction Exclusion Zone', or '(CEZ)', is based upon the RPA and forms the exclusion zone to which access is prohibited during the project phase.

13.7 A 'Tree Constraints Plan', or TCP, is a scaled plan prepared by an arboriculturist showing the RPA and the accurate canopy spread of a tree, along with information to identify the tree by reference to a survey schedule. It will also identify any under and above ground constraints. The author of this report will produce this using AutoCAD.

13.8 An 'Arboricultural Impact Assessment', or 'AIA', is a study or report undertaken by the project arboriculturist. It is a detailed evaluation of the direct and indirect effects of the proposed development on the tree(s) and the potential future maintenance of the tree(s). Where necessary, it recommends mitigation. The assessment takes account of the effects of any tree loss required to implement the design, and any potentially damaging activities that are proposed in the vicinity of retained trees.

13.9 An 'Arboricultural Method Statement", or 'AMS', is a methodology for the implementation of any aspect of development that has the potential to result in loss of or damage to a tree. The AMS is likely to include details of an on-site tree protection monitoring regime.

13.10 A 'Tree Protection Plan', or 'TPP', is a scale plan that is superimposed on a layout plan. It is based on the topographical survey, showing all hard surfacing and other existing structures within the RPA. The plan indicates the precise location of protective barriers that need to be erected in order to form a construction exclusion zone around the retained trees.

13.11 Other plans and documents may be referred to and annexed where appropriate.

13.12 'Access facilitation pruning' is a one-off tree pruning operation, the nature and effects of which are without significant adverse impact on the trees' physiology or amenity value, which is directly necessary to provide access for operations on site.

13.13 'Services' are any above or below ground structure or apparatus required for utility provision. Examples include drainage, gas supplies, ground source heat pumps, CCTV and satellite communications.

13.14 'Stem' is the principal above-ground structural component(s) of a tree that supports its branches.

13.15 'Structures' are manufactured objects, such as a building, carriageway, path, wall, service runs, and built or excavated earthworks.

13.16 A 'veteran tree' is recognized by a criterion set by *BS2998:2010, Tree Work – Recommendations*. It must show signs of biological, cultural or aesthetic value that are characteristic of, but not limited to, individuals surviving beyond the typical age range for the species concerned.

Appendix I – Tree survey

Tree survey undertaken to *BS5837:2012 Trees in relation to construction – recommendations*

Tree No.	Tree identification method in sequential order – TXXX=Existing trees, GX=Group of trees, HX=Hedgerow
Species	Species
Height in (m)	Approximate height of tree in metres
DBH in (mm)	Stem diameter in millimetres taken at 1.5 metres above ground level. AV=average diameter (see appendix III)
Branch spread in (m) N - E - S – W	Branch spread in metres reflecting the spread at the four principal compass points. N/A= Not applicable in woodland settings
Existing height above ground in (m)	Height in metres of crown clearance above existing ground level. To include first significant branch and direction of growth (e.g. 2.5 – N) Height of lower form of Canopy to inform current ground clearance, crown/stem ratio and shading
Life stage	Age classification (Y=young, SM=semi-mature, EM=early-mature, M=mature, LM=late-mature, OM=over-mature)
Est. remain years	Approximate years remaining (+40=minimum of 40 years, +20=minimum of 20 years, +10=minimum of 10 years, <10 less than 10 years)
General observations	Condition of tree (good, fair, poor, dead), structural and/or physiological condition, and/or preliminary management recommendations
Preliminary management recommendations	Works needed in order to retain tree in current setting or where works would be needed in order to facilitate development
Physical condition and structural condition	Physiological condition (good, fair, poor, dead), to include structural defects such as the presence of any decay, fungal issues, pathogens and defects)
RPA in (m^2)	Area directly calculated from the DBH measurement (single stem/multiple stem variant, as outlined within the Standard, see appendix III)

Ref.	Species	Measurements	General Observations	Retention Category	RPA	Condition
H11	Common Holly x2 *(Ilex aquifolium)* Lawson Cypress x3 *(Chamaecyparis lawsoniana)*	Height (m): 4 5 stems, avg.(mm): 150 Spread (m): 0.5N, 0.5E, 0.5S, 0.5W Crown Clearance (m): 0 Lowest Branch (m): 0(X) Life Stage: Early Mature Rem. Contrib.: 20+ Years	Hedge to side on clients land	C1	Area: 10 sq m, plus a 1m buffer.	Other Reference: Distance1: Distance2: Custom Number 3: Physiological Cond: Fair Structural Cond: Fair Bat Habitat: None
T01	Lawson Cypress *(Chamaecyparis lawsoniana)*	Height (m): 4.5 Stem Diam (mm): 150 Spread (m): 0.5N, 0.5E, 0.5S, 0.5W Crown Clearance (m): 0 Lowest Branch (m): 0(X) Life Stage: Early Mature Rem. Contrib.: 40+ Years	On boundary possibly causing damage to wall and pavement.	C1	Radius: 1.8m. Area: 10 sq m.	Other Reference: Distance1: Distance2: Custom Number 3: Physiological Cond: Good Structural Cond: Good Bat Habitat: None
T02	Leyland Cypress *(Cupressocyparis leylandii X)*	Height (m): 6.5 Stem Diam (mm): 350 Spread (m): 2.5N, 2.5E, 2.5S, 2.5W Crown Clearance (m): 0	Garden feature tree that has been pruned to a shape	C1	Radius: 4.2m. Area: 55 sq m.	Other Reference: Distance1: Distance2: Custom Number 3: Physiological Cond: Fair

		Lowest Branch (m): 0(X) Life Stage: Early Mature Rem. Contrib.: 20+ Years				Structural Cond: Fair Bat Habitat: None
T03	Lawson Cypress *(Chamaecyparis lawsoniana)*	Height (m): 5 Stem Diam (mm): 250 Spread (m): 1.5N, 1.5E, 1.5S, 1.5W Crown Clearance (m): 0 Lowest Branch (m): 0(X) Life Stage: Early Mature Rem. Contrib.: 20+ Years	Garden feature which has been pruned in to a feature	C1	Radius: 3.0m. Area: 28 sq m.	Other Reference: Distance1: Distance2: Custom Number 3: Physiological Cond: Fair Structural Cond: Fair Bat Habitat: None
T04	Lawson Cypress *(Chamaecyparis lawsoniana)*	Height (m): 5 Stem Diam (mm): 250 Spread (m): 1.5N, 1.5E, 1.5S, 1.5W Crown Clearance (m): 0 Lowest Branch (m): 0(X) Life Stage: Early Mature Rem. Contrib.: 20+ Years	Garden feature which has been pruned in to a feature	C1	Radius: 3.0m. Area: 28 sq m.	Other Reference: Distance1: Distance2: Custom Number 3: Physiological Cond: Fair Structural Cond: Fair Bat Habitat: None
T05	Leyland Cypress *(Cupressocyparis leylandii X)*	Height (m): 5 Stem Diam (mm): 250 Spread (m): 1.5N, 1.5E, 1.5S, 1.5W Crown Clearance (m): 0 Lowest Branch (m): 0(X) Life Stage: Early Mature	Garden feature which has been pruned in to a feature	C1	Radius: 3.0m. Area: 28 sq m.	Other Reference: Distance1: Distance2: Custom Number 3: Physiological Cond: Fair Structural Cond: Fair Bat Habitat: None

		Rem. Contrib.: 20+ Years				
T06	Lawson Cypress *(Chamaecyparis lawsoniana)*	Height (m): 5 Stem Diam (mm): 250 Spread (m): 1.5N, 1.5E, 1.5S, 1.5W Crown Clearance (m): 0 Lowest Branch (m): 0(X) Life Stage: Early Mature Rem. Contrib.: 20+ Years	Garden feature which has been pruned in to a feature	C1	Radius: 3.0m. Area: 28 sq m.	Other Reference: Distance1: Distance2: Custom Number 3: Physiological Cond: Fair Structural Cond: Fair Bat Habitat: None
T07	Lawson Cypress *(Chamaecyparis lawsoniana)*	Height (m): 5 Stem Diam (mm): 250 Spread (m): 1.5N, 1.5E, 1.5S, 1.5W Crown Clearance (m): 0 Lowest Branch (m): 0(X) Life Stage: Early Mature Rem. Contrib.: 20+ Years	Garden feature which has been pruned in to a feature	C1	Radius: 3.0m. Area: 28 sq m.	Other Reference: Distance1: Distance2: Custom Number 3: Physiological Cond: Fair Structural Cond: Fair Bat Habitat: None
T08	Apple *(Malus sp.)*	Height (m): 3 Stem Diam (mm): 250 Spread (m): 1N, 1.5E, 1S, 0.5W Crown Clearance (m): 2 Lowest Branch (m): 1(S) Life Stage: Mature	Fruit tree has been pollard in past to contain growth	C1	Radius: 3.0m. Area: 28 sq m.	Other Reference: Distance1: Distance2: Custom Number 3: Physiological Cond: Good Structural Cond: Poor Bat Habitat: None

		Rem. Contrib.: 20+ Years				
T09	Apple *(Malus sp.)*	Height (m): 3 Stem Diam (mm): 200 Spread (m): 0.5N, 1.5E, 0.5S, 1.5W Crown Clearance (m): 2 Lowest Branch (m): 1(S) Life Stage: Mature Rem. Contrib.: 20+ Years	Fruit tree has been pollard in past to contain growth	C1	Radius: 2.4m. Area: 18 sq m.	Other Reference: Distance1: Distance2: Custom Number 3: Physiological Cond: Good Structural Cond: Poor Bat Habitat: None
T10	Winter-Flowering Cherry *(Prunus subhirtella)*	Height (m): 5.5 Stem Diam (mm): 350 Spread (m): 2.5N, 2.5E, 2.5S, 2.5W Crown Clearance (m): 2 Lowest Branch (m): 2(N) Life Stage: Early Mature Rem. Contrib.: 40+ Years	Neighbouring tree	C1	Radius: 4.2m. Area: 55 sq m.	Other Reference: Distance1: Distance2: Custom Number 3: Physiological Cond: Fair Structural Cond: Fair Bat Habitat: None
T12	Blue Cedar *(Cedrus atlantica glauca)*	Height (m): 6 Stem Diam (mm): 450 Spread (m): 5.5N, 5.5E, 5.5S, 5.5W Crown Clearance (m): 3.5 Lowest Branch (m): 1(N) Life Stage: Mature	3rd party land no overhang, has been topped in past looks like due to storm damage	B1	Radius: 5.4m. Area: 92 sq m.	Other Reference: Distance1: Distance2: Custom Number 3: Physiological Cond: Fair Structural Cond: Fair Bat Habitat: None

		Rem. Contrib.: 40+ Years				
T13	Lawson Cypress *(Chamaecyparis lawsoniana)*	Height (m): 9 Stem Diam (mm): 370 Spread (m): 2.5N, 2.5E, 2.5S, 2.5W Crown Clearance (m): 1 Lowest Branch (m): 1(S) Life Stage: Early Mature Rem. Contrib.: 40+ Years	1m from kerb canopy over driveway	B1	Radius: 4.4m. Area: 61 sq m.	Other Reference: Distance1: Distance2: Custom Number 3: Physiological Cond: Good Structural Cond: Good Bat Habitat: None
T14	Magnolia *(Magnolia sp.)*	Height (m): 4 Stem Diam (mm): 200 Spread (m): 1N, 1E, 1S, 1W Crown Clearance (m): 1 Lowest Branch (m): 1(W) Life Stage: Mature Rem. Contrib.: 20+ Years	Formal tree which has been pruned to a shape	C1	Radius: 2.4m. Area: 18 sq m.	Other Reference: Distance1: Distance2: Custom Number 3: Physiological Cond: Fair Structural Cond: Fair Bat Habitat: None

Appendix II – Photographs

AEL-18509-PIC1 – H11 which will require pruning back

AEL-18509-PIC2 – Showing T2 in rear garden

AEL-18509-PIC3 – Showing trees in garden as features which are regularly maintained

AEL-18509-PIC4 – Showing trees on open area opposite house which will require some tree protection

Appendix III – Tree categorisation table (BS5837:2012)

Category and definition	Criteria (including subcategories where appropriate)			Identification 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.	• Trees that have a serious, irremediable, structural defect, such that their early loss is expected due to collapse, including those that will become unviable after removal of other category U trees (e.g. where, for whatever reason, the loss of companion shelter cannot be mitigated by pruning) • Trees that are dead or are showing signs of significant, immediate, and irreversible overall decline • Trees infected with pathogens of significance to the health and/or safety of their trees nearby, or very low quality trees suppressing adjacent trees of better quality. *(note: Category U trees can have existing or potential conservation value which it might be desirable to preserve)*			
Trees to be considered for retention				
	1. Mainly arboricultural qualities	2. Mainly landscape qualities	3. Mainly cultural values, including conservation	
Category A Trees of high quality with an estimated remaining life expectancy of at least 40 years.	Trees that are particularly good examples of their species, especially if rare or unusual; or those that are essential components of groups or formal or semi-formal arboricultural features (e.g. the dominant and/or principal trees within an avenue)	Trees, groups or woodlands of particular visual importance as arboricultural and/or landscape features	Trees, groups or woodlands of significant conservation, historical, commemorative or other value (e.g. veteran trees or wood-pasture)	
Category B Trees of moderate quality with an estimated remaining life expectancy of at least 20 years.	Trees that might be included in category A, but are downgraded because of impaired condition (e.g. presence of significant though remediable defects, including unsympathetic past management and storm damage), which that they are unlikely to be suitable for retention for beyond 40 years; or trees lacking the special quality necessary to merit the category A designation	Trees present in numbers, usually growing as groups or woodlands, such that they attract a higher collective rating than they might as individuals; or trees occurring as collectives but situated so as to make little visual contribution to the wider locality.	Trees with material conservation or other cultural value	

Category C Trees of low quality with an estimated remaining life expectancy of at least 10 years, or young trees with a stem diameter below 150mm	Unremarkable trees of very limited merit or such impaired condition that they do not qualify in higher categories	Trees present in groups or woodlands, but without this conferring on them significantly greater collective landscape value; and/or trees offering low or only temporary/transient landscape benefits	Trees with no material conservation or other cultural value	

Appendix IV – Bibliography

British Standards Institution (2010), *BS3998 Tree Work - Recommendations*

British Standards Institution (2012), *BS5837 Trees in relation to design, demolition and construction - Recommendations*

Appendix V – About the author

Author of this report: Mr Reuben Hayes, M.Arbor.A; CMgr MCMI

Qualifications

Quantified Tree Risk Assessment, 2018 – QTRA

CMI Management and Leadership (Level 5) – May 2015

Professional Tree Inspection, 2009 – Lantra

Higher National Diploma, Arboriculture (HND), July 2003 – Warwickshire College

National Diploma (Tree Management and Arboriculture), 2000 – Warwickshire College

Experience

Apex Environmental Ltd: May 2013 – Present

Cannock Chase Council: July 2010 – Present

RJH Silvicultural and Arboricultural Services Ltd: 2008 – 2010

London Borough of Camden: January 2005 – July 2010

Three Rivers District Council: March 2003 – January 2005

Forestry Commission: 1997 – 1998

National Trust

Membership of professional bodies

Professional Member of the Arboricultural Association

Professional Member of Consulting Arborist Society (CAS)

Associate Member of the Institute of Chartered Foresters

Fully accredited Chartered Manager of Chartered Management Institute (CMI)

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