

Tree Condition Inspection

at

62 Field Park Road

On the instructions of
Vanessa Waters on behalf of Residents.

Dated: April 2023



Reported by Mr. Vaughan. Lewis. L4 Dip Arb. M.ARBORA
Approved by Mr. S J Ambler Cert.Arb.(RFS), Tec.Arbor.A., Dip.Arb.(RFS), F.ARBORA.
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Signed Steve Ambler		Signed Vaughan Lewis	
Date	4 th May 2023	Date	25 th April 2023

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1. INTRODUCTION

I am instructed by Vanessa Waters on behalf of the residents, to undertake a tree condition survey at 62 Fields Park Road in the City of Newport. The purpose of the inspection is to visually assess the general health and condition of the subject trees, to identify any obvious defects or concerns that may pose unacceptable risk to third parties and being the intention of my clients to manage such risk. Recommendations are sought where appropriate, and the findings are offered here by way of a written report.

This visual tree assessment was carried out on the 30th of March 2023 during dry and bright weather conditions, deemed reasonable for carrying out such an inspection. The trees were inspected from ground level. No diagnostic equipment was used during the assessment.

The inspection was conducted by Vaughan Lewis, our Arboricultural & Woodland Consultant, who has worked within the arboricultural and forestry sectors for over 25 years, most recently as the Principal Arboricultural and Woodlands Officer for a local authority. Vaughan holds the following relevant qualifications: -

- a) Professional Technician in Arboriculture (Arboricultural Association)
- b) Professional Member of the Arboricultural Association
- c) Landscape Science, Higher National Diploma -Distinction. (Pencoed College (University of Glamorgan)
- d) Woodland Management, National Diploma - Distinction (Hereford College of Agriculture)
- e) Rural Studies, Btec First Diploma – Distinction (Pencoed College)
- f) Lantra Award, "Bats and Arboriculture – A Guide for Practitioners" developed by The Bat Conservation Trust.
- g) Professional Tree Inspection Certificate (Lantra Awards)

This Tree Survey Report is reviewed and approved by Steve Ambler who is the company founder and a professional arboriculturist with over 40 years' experience in the industry. This Consultancy Practice was established during 1999 and expanded in 2006 with the launch of a specialist tree management unit to become - Steve Ambler & Sons Tree Specialists. Steve holds the following relevant Arboricultural qualifications: -

- a) Certificate in Arboriculture (Royal Forestry Society)
- b) Professional Technician in Arboriculture (Arboricultural Association)
- c) Professional Diploma in Arboriculture (Royal Forestry Society)
- d) Fellow Member of the Arboricultural Association.
- h) Lantra Award, "Bats and Arboriculture – A Guide for Practitioners" developed by The Bat Conservation Trust.

Tree measurements are estimated only.

This Report does not consider damage in relation to subsidence or heave in relation to clay soils and a soil test has not been carried out.

The provision and acceptance of this Report are subject to the general terms and conditions of Steve Ambler & Sons Tree Specialists Ltd.

Unless otherwise stated, this Report remains valid for 12 months. Trees require frequent inspections and the next one is recommended within 12 months of the date of this Report.

Where there is any recommendation within this Report for further investigation or diagnostic testing, climbing inspections, vegetation removal to allow a follow up survey etc., the onus is firmly on the Client to instruct such works in writing.

2. SITE DESCRIPTION

The site is situated within the Allt-yr-Yn district of north-west Newport, in South Wales. The nearest post code being NP20 5BH, with an Ordnance Survey Grid Reference: ST299881. The property is accessed from Fields Park Road via a private entrance, and internal driveway.

The main house was built as a semi-detached property and is regarded as a good example of the Jacobethan style. The southern section of this semi-detached property forming this survey site, sits within its own grounds. I am informed that the building is currently Grade Two Listed.

The site comprises of the main house, having recently been fully restored, and several new build detached houses set within their own private gardens and communal grounds, with the latter being the responsibility of the collective residents, under a Management Company.

The site is surrounded by residential development, primarily consisting of detached properties, set within substantial gardens. The northern boundary consists of a fence dissecting the northern and southern sections of the main house. The eastern boundary is dog legged, with a row of mature trees forming the southern end and a Cherry laurel (*Prunus laurocerasus*) hedge having been planted halfway along, which merges into a row of Lawson cypress (*Chamaecyparis lawsoniana*), and then a group of sycamore (*Acer pseudoplatanus*). The west boundary rises to meet the adjoining property, with a retaining wall structure.

All the trees would be regarded as having **high to very -high target occupancy ratings**.

The land under investigation is predominantly level, although most of the retained trees are located on gently sloping banks with an easterly aspect or to the edge of the now extended driveway. A layer of geotextile and mulched woodchip has been laid around the Root Protection Area of most of the trees on site, in order to improve the rooting medium and control unwanted vegetation. This provides an improved rooting environment, but does conversely limit an inspection of the rooting area for the relevant trees, as is the case for the pollarded Lime on the west boundary, which has garden structures built within its rooting area. Therefore, an assessment of the rooting area for these trees cannot be made using VTA (Visual Tree Assessment) techniques.

The trees are predominantly mature and even aged and include horse chestnut, lime, cedar, sweet chestnut, pine, sycamore and a coastal redwood. Of particular note is a Turkey oak (*Quercus cerris*) of some considerable size and stature near the main house, and certainly a notable specimen in the context of Newport.

The mature trees are afforded legal protection under a **Tree Preservation Order (1/76)**.

3. OBSERVATIONS

These trees provide significant amenity value in the local and wider environment and being in an elevated position in Newport are visible. They have been carefully incorporated into the original design layout for the site with a view to creating a mature treed setting, which is wholly in keeping with the original main house and the bespoke new build houses, each with their own character. It appears these trees were afforded a great deal of care through the construction and renovation phases of this site, as both the developer and Local Planning Authority recognised the value of them.

A regular condition inspection regime and implementation of recommendations should appease any anxiety that can be perceived by the residents and neighbours when large trees are in close proximity to housing.

The trees on the east facing bank within the communal grounds are co-existing with a shared rooting area and a certain reliance upon each other for protection from the elements. Elsewhere this co-reliance has been disrupted due to the removal/pollarding of neighbouring trees in response to condition and health issues.

4. TREE SURVEY & TREE SURVEY PLAN

Trees are living dynamic organisms that can be affected by external environmental conditions and very occasionally internal biological symptoms that are not visible causing failure without warning. It is therefore not possible to state with any certainty that any tree is completely safe.

The visual tree inspection techniques used here follows the principles of the first phase of the Visual Tree Assessment (VTA) method created by Mattheck¹. This is a method of tree diagnosis on a scientific basis of tree biomechanics. It consists of viewing each subject tree from ground level and from close quarters and proceeds on the following basis...

1. The root-plate (rooting zone) is assessed visually where not obstructed by vegetation or extraneous matter looking for signs of poor anchorage. Particular attention is paid to areas at the base of the tree between buttress roots and the interface between the soil and stem base where possible, assessing the condition of the bark, looking for signs of decay fungi and or necrotic tissue, splits cracks or cavities or other predisposing factors. If sufficient evidence cannot be obtained, then further investigations will be requested.
2. The bole (trunk) is assessed visually looking for signs or symptoms that may indicate an internal flaw such as cracks, splits, bulges, cavities, indentations, compression defects, or areas of necrotic periderm, cavities, fungal fructifications, wood boring or sucking insect activity and structural defects or other predisposing factors. Resonance testing is used where visual evidence may indicate the presence of decay or stem hollowing. If sufficient evidence cannot be obtained, then further investigations and/or a climbing inspection will be requested.
3. The crown is assessed visually looking for any indications of physiological impairment through symptoms such as low vigour, poor vitality, die back, undersized leaves, and or abnormal colour, some of which are dependent on timing. The structure of the crown is also assessed visually looking for compression defects, cavities, splits, hazard beams, and decay fungi. Where any potential defects are evident; binoculars are sometimes used for a closer examination. If sufficient evidence cannot be obtained when using binoculars, then further investigations and/or a climbing inspection will be requested.

Each tree or group of trees surveyed are identified on the attached Tree Location Plan (Appendices) located at the rear of this Report. It provides reference to the location of the trees using a tree reference number or tree tag number or both. Where numbered tags are used, they are attached to the trunk of each tree at about 1.5-2.0 metres above ground level. A table found in Section 6 - The Findings, later in this Report records the baseline details of each tree or group against the reference number or numbered tag.

¹ Mattheck C. & Breloer H. The Body Language of Trees Department of the Environment.

The surveyed trees have been plotted on the Tree Location Plan within the Appendices.

Where trees are found to require immediate attention, they will be identified in red bold text.

5. TREE SURGERY SCHEDULE

Number (No.) The tree number provides reference to an individual tree either by way of T1, T2 (tree 1 or tree 2) and relates to an attached plan showing their approximate positions or through a series of numbers (00123) that relates to a tag on the tree and may also be indicated on an attached plan.

Species The species is the given name of the tree which is usually provided in both the common and scientific names.

Diameter (DBH) In the following text, the diameter for each tree is estimated in millimetres based on the diameter of the trunk measured at a height of approximately 1.5 metres above ground level, unless otherwise stated. Alternatively, the following abbreviations may be used; -

S (Small)	< 100-249-mm
M (Medium)	250-499-mm
L (Large)	500-749-mm
V L (Very large)	750-mm+

Crown Spread The crown spread of the tree is measured as the diameter (from the centre of the trunk) in meters and in most cases, covers the largest measurement. Alternatively, the following abbreviations may be used; -

S (Small)	< 5 metres
M (Medium)	5 – 10 metres
L (Large)	11 – 15 metres
V L (Very large)	> 16 metres

Height The height of the tree is measured in metres and is usually approximate. If the abbreviation 'Clinom' appears after the given measurement, it indicates, the tree has been measured with an optical measuring instrument, a Clinometer, and is accurate to within 5 metres.

S (Small)	3 m – 8 metres
M. (Medium)	8 m – 15 metres
L. (Large)	15 m – 23 metres
V L. (Very large)	above 23 metres

Age The age of the tree is given based on its life expectancy. For example, an oak tree at an age of 100-years is perceived as early mature when a hawthorn at 100 years would be considered old. Age classes are given as follows: -

- Y.** **Young trees** (age less than 1/3 life expectancy)
- EM.** **Early Mature** (between 1/3 – 2/3 life expectancy, still growing vigorously but not as fast as a younger tree)
- M.** **Mature trees** (above 2/3 life expectancy. Growth rates beginning to slow down at this stage)
- OM.** **Over Mature trees** (growth rates slow and possibly beginning to display signs of decline)
- V.** **Veteran** (decline is well set-in, but the tree **may** be of specific ecological value. The tree is likely to contain sufficient deadwood and decay that is a special habitat for many rare invertebrates that are considered to be at risk from extension)

Recommendations The recommendations are provided giving the appropriate action required for the tree or groups of trees to fulfil the brief, which possibly include reducing foreseeable risk or improve the physiology of the tree.

Target Rating

Target rating is used to consider how likely a mobile or stationary target will be present at any one moment in time, within proximity to the tree under investigation. It is often approximated after a short period on site and often with little knowledge of the site. Unless otherwise stated, no information on visitor or vehicle numbers have been provided by the client and this assessment is based on a small 'snapshot in time', the client should consider this assessment and where it is not considered accurate, should make the Author aware immediately and certainly within 7 days of issue of the Report.

Low Target Occupancy (occasional use)

Infrequently used footpaths, isolated car parks, desire lines (permissive and non-permissive paths) through woodlands, open spaces without particular features or attractions, (such as picnic benches), and difficult to access areas due to undergrowth, perhaps the occasional jogger, dog walker or cyclist could be expected during day light and reasonable weather conditions.

Medium Target Occupancy (Intermittent use)

Target does not present for any length of time i.e. low use car parks, footpaths in countryside, parkland open during normal working hours and access roadways. No stationary targets and could normally be expected during day light and reasonable weather conditions.

High Target Occupancy (Frequent use)

Target does not present for 24 hours but a frequently used site such as - day use car parks, B-Class and minor roads, footpaths in towns and cities, offices operating normal working hours, excluding weekends, access roadways to a facility. Target maybe stationary for short periods of time.

Very High Target Occupancy (Constant use)

Where persons are present at all times such as a hospital building and car park, A-class roads, railways, dual carriageways, motorways and residential properties where vehicles or persons are expected during any time day or night.

Priority Coding is provided to relay the urgency in which any recommended work is required based on the hazard presented by the tree and the considered target occupancy. Whilst it highlights the most urgent works to help offset risk, it may also be helpful for budgeting purposes.

Priority 1	Top priority; to be undertaken as soon as it is practicable for reasons of offsetting foreseeable risk, injury or damage and where the likelihood of it occurring is considered high. Action should be taken diligently.
Priority 2	Medium priority; attention strongly advised at your earliest convenience to deal with a problem that whilst is not as serious as priority one, carries significant concern and liability. In any event, works should be completed within 6 months.
Priority 3	Low Priority; the work is advised but of a lower priority than above which should be carried out before a period of 12 months' lapses.
Priority 4	Minor Problems representing no immediate hazard at the time of inspection although potential for harm or hazard to develop as the tree grows or faults developing that may become significant at a later date if left to develop. Works without any immediate urgency, possibly to rectify a minor fault or to abate a nuisance present or developing.

- *All measurements given are approximate.*
- **AGL:** an abbreviation for above ground level.

6. THE FINDINGS

In order to provide continuity, the tree numbers used here reflect those numbers used in previous tree reports dating back to the original tree report of 2007. However, please note, that they do no longer run sequentially as several trees have since been removed.

Tree N.o	Tree Tag	Tree Species	Stem (mm)	Crown Spread	Tree Height (m)	Age Class	Remarks	Recommendations	Target	Bat Habitat	Priority	Photo Ref
1	3205	Horse chestnut (<i>Aesculus hippocastanum</i>)	730	L	22	M	This is a lapsed high pollard formed at 8-m above ground level (AGL) with 15-m long, pole growth, creating a dense clustered crown. The asymmetric crown is pre-disposed to the road due to the presence of a dominant neighbouring tree. The crown is unlikely to be providing the minimum statutory highway clearance of 5.2-m, especially once in leaf, with the additional weight. Minor mechanical wounds noted on buttress flares. Tensile fork occurs at 4-m AGL. Located in management company land.	Undertake a climbing inspection of the pollard knuckles to ascertain their condition. <i>(Should its structural condition decline, consider a phased pollard restoration over two interventions).</i> End weight reduction pruning over the road to provide the Statutory Highway clearance of 5.2-m above ground level. Traffic management will be necessary and in agreement with the statutory highway authority.. Monitor annually.	High	Low	3	/

Tree N.o	Tree Tag	Tree Species	Stem (mm)	Crown Spread	Tree Height (m)	Age Class	Remarks	Recommendations	Target	Bat Habitat	Priority	Photo Ref
2	3204	Horse chestnut (<i>Aesculus hippocastanum</i>)	750	L	22	M	As with Tree 1, this is a high, lapsed pollard, formed at 8-m AGL with 14-m long pole growth creating a dense clustered crown. Historically, the crown has been reduced at 12-14-m above ground level, effectively creating a two-stage pollard, with knuckles forming at each point. A dead peg measuring 1.5-m in length occurs at 4-m AGL to the west and to the east, with live adventitious branch regrowth. The lateral and descending branches to the east overhang the neighbouring property. The limbs formed at 6-8-m AGL extend beyond the main crown by some 3-m. Located in management company land.	Undertake a climbing inspection of the pollard knuckles to ascertain their condition. <i>(Should its structural condition decline, consider a phased pollard restoration over two interventions).</i> Undertake end weight reduction pruning, on the east crown at 6-8-m, where it overhangs the neighbouring garden by 2-m distally. Access to the neighbours property will be required, and some vehicles may need to be moved to accommodate the operation. Monitor annually.	High	Low	3	1

Tree N.o	Tree Tag	Tree Species	Stem (mm)	Crown Spread	Tree Height (m)	Age Class	Remarks	Recommendations	Target	Bat Habitat	Priority	Photo Ref
3	714	Ash (<i>Fraxinus excelsior</i>)	640	L	30	M	There is a limited view of the stem base to the north as it can only be viewed through the boundary fencing. There is a large wound to the north where a limb has been removed. The tree forks under compression at 5-m AGL to form two co-dominant stems. Reaction wood forms prominent ribs to either side of this structurally weak union. The developing ivy is starting to occlude visibility of the main fork union. The crown is open and formed of slender limbs. It is possibly displaying the early signs of Ash dieback disease (<i>Hymenoscyphus fraxineus</i>), with asymptomatic young, vertical shoot growth developing within the inner crown. The tree is likely to decline in health as the disease progresses, and this will result in the tree becoming brittle, and likely eventual death. It is important to note that trees infected with Ash dieback disease are NOT safe for tree surgeons to climb once the disease reaches more advanced stages (Health stage 3 & 4). Several primary branches have suffered wind damage and have failed to the east. Located in garden of main house.	Climb and dismantle. (The installation of a single cable brace to support the weak fork union is problematic due to the slender nature of the supporting stems and the secondary forking at 10-m AGL and therefore considered an unsuitable solution. In addition, it now seems likely that the tree is in the early stages of infection with Ash dieback disease and so has a limited life expectancy.	High	Low	2	7

Tree N.o	Tree Tag	Tree Species	Stem (mm)	Crown Spread	Tree Height (m)	Age Class	Remarks	Recommendations	Target	Bat Habitat	Priority	Photo Ref
4	3202	Sweet chestnut (<i>Castanea sativa</i>)	640	L	5	M	This is a recently pollarded tree (circa 2016), at 4-m above ground level in response to a significant structural decay issue, identified within the main stem. Although pollarding should typically be restricted to previously pollarded specimens or semi mature trees or younger, this was deemed to be a viable option, given that the species can respond well to such treatment, in preference to losing the tree. In response to the pollard operation, this tree has produced basal and stem epicormic growth, with the latter forming from 2-m AGL. Only remove the minimum amount of basal epicormics to permit reasonable access along the drive, as and when applicable. The retention of basal epicormics should be retained where at all possible, especially whilst the tree builds up its energy reserves following the significantly disruptive pollarding operation. The tree is located within a slightly raised bed, with woodchip overlaid in the rooting area. Located in management company land.	Remove or shorten basal epicormics when they cause an obstruction of the driveway. Place on a pollard pruning cycle of 10-15 years subject to growth rates and size, to be assessed by a qualified arborist prior to any intervention. Monitor annually.	High	Low	4	/

Tree N.o	Tree Tag	Tree Species	Stem (mm)	Crown Spread	Tree Height (m)	Age Class	Remarks	Recommendations	Target	Bat Habitat	Priority	Photo Ref
6	1088	Horse chestnut (<i>Aesculus hippocastanum</i>)	1040	L	32m	M	This tree is a lapsed, high pollard formed at 8-10-m AGL. The cream coloured, flat fungal fruiting body of <i>Rigidoporus ulmarius</i> was identified between the buttresses to the north-east during the 2007 survey, but has not been observed since. However, it still appears to be associated with minor localised decay when assessed with a rudimentary resonance test, using a sounding hammer. <i>R. ulmarius</i> results in a brown rot, typically associated with a wound site. Here, it is located on the structurally significant, tension side of the tree with an asymmetric crown pre-disposed to the south and west. Several black exudates were noted on the stem up to 2-m above ground level, likely to be associated with the commonly occurring Bleeding canker of horse chestnut (<i>Pseudomonas syringae</i> pv. <i>aesculi</i>). Although the tree was inspected out of leaf during the last two condition surveys, a discussion with the resident would suggest the crown also has the commonly occurring Guignardia leaf blotch (<i>Guignardia aesculi</i>). A rather disfiguring condition that turns the leaves a patchy brown, sometimes curling along their length and can result in premature leaf abscission. Typically this occurs in the lower portion of the crown. Although this reduces the ability of the tree to photosynthesis, there is no evidence	Given that this tree is likely to have low vitality a single pollard operation is not advised. Therefore:- Undertake a two phased pollard operation, initially by 6-m, and then 3 years later at 1.5-m above the previous knuckles, and retaining the lower branching. Qualified climber to undertake a bat, and nesting bird inspection prior to works occurring. Remove deadwood. Place on a 10-year, pollarding cycle, subject to growth rates and size, to be assessed by a qualified arborist prior to any intervention.	High	Med	2	2

Tree N.o	Tree Tag	Tree Species	Stem (mm)	Crown Spread	Tree Height (m)	Age Class	Remarks	Recommendations	Target	Bat Habitat	Priority	Photo Ref
							of serious long-term consequences. Also Horse chestnut leaf minor (<i>Cameraria ohridella</i>) is typically present (unconfirmed). The tree forks at 4-m AGL to form a dominant south-west stem, and sub-ordinate east stem is formed under tension, but with a broad deep rib on the tension side and a slightly less prominent column of reaction wood to the south-east, in response to torsional wind loading. There is a decay cavity at 4-m to the north, measuring 300-mm diameter x 300-mm deep (estimated), with an ascending pocket of decay. A small downward facing cavity also occurs to the south at 4.5-m AGL potentially coalescing, although there is no obvious indication when undertaking a rudimentary resonance test with a sounding hammer, off a ladder. The cavity opening has been widened by squirrels, but still has bat potential. There is an upward facing cavity in the pollard knuckle on the inner side of the east stem. A dead peg with decay cavity is noted at 9-m AGL to the southwest, measuring an estimated 1000-mm x 300-mm x 100-mm.	Monitor annually.				

Tree N.o	Tree Tag	Tree Species	Stem (mm)	Crown Spread	Tree Height (m)	Age Class	Remarks	Recommendations	Target	Bat Habitat	Priority	Photo Ref
							The arching primary branch to the south has a small decay wound at 8-m AGL at the point of a stress notch, where a change of branch angle occurs. Located in management company land.					
7	1694	Crimean lime (<i>Tilia x euchlora</i>)	730	L	22.2	M	This tree forks at 8-m AGL to form a bifurcated stem, with a subordinate east stem and dominant west stem. It has recently undergone a crown reduction (circa 2018). A small decay cavity occurs on the tension side of the lower arching limb, over the Court House driveway. There is notable reaction wood suggesting significant decay. Located in management company land.	Remove lower limb over the Court House drive.	High	Low	3	3
8	1693	Horse chestnut (<i>Aesculus hippocastanum</i>)	710	L	23.7	M	End weight reduction pruning has recently occurred to the west, over the drive (circa 2018). There is a wind damaged and fractured primary branch to the north-east with limited live growth along its length. An upward facing cavity was noted on the east scaffold limb formed at 6-m AGL at 1.5-m proximal to the parent stem. The cavity extends into the base of the north side, primary branch. Located in management company land.	Climber to inspect the cavity on the east limb, under the supervision of a qualified arborist. The aim will be to ascertain the extent of decay and determine the limb's structural integrity – subject to findings it is likely to require a reduction or removal. If the visual	High	Low	2	/

Tree N.o	Tree Tag	Tree Species	Stem (mm)	Crown Spread	Tree Height (m)	Age Class	Remarks	Recommendations	Target	Bat Habitat	Priority	Photo Ref
								climbing inspection is inconclusive undertake decay detection testing using a Resistograph Drill, in order to map the extent of decay.				
10	1689	Common lime (<i>Tilia x europaea</i>)	960	L	29	M	Slightly compressive fork union between the parent stem and the arching, north limb. There is small diameter deadwood within the crown, deemed to be at normal levels for the species and age of tree, in association with the process of cladoptosis. Located in management company land.	Monitor fork union	High	Low	4	/
11	1687	Sycamore (<i>Acer pseudoplatanus</i>)	500	M	18-m	EM	There is a basal decay wound between the southern buttresses, measuring 200-mm in diameter. A linear stem wound occurs at 1.5-m AGL measuring 200-mm x 50-mm, with wound wood forming to the periphery, and as a result the wound is almost occluded. This is a somewhat suppressed specimen under the canopy of the neighbouring dominant pine (T12). Located in garden of the main house.	Monitor annually	High	Low	4	/

Tree N.o	Tree Tag	Tree Species	Stem (mm)	Crown Spread	Tree Height (m)	Age Class	Remarks	Recommendations	Target	Bat Habitat	Priority	Photo Ref
12	1686	Corsican pine (<i>Pinus nigra</i> ssp. <i>laricio</i>)	910	L	27.3	M	There is a pocket of basal decay developing to the north, identified with a rudimentary resonance test, using a sounding hammer, measuring approximately 200-mm long x 200-mm high. Due to wind-loading there is a broadening of the base to the south. As typical for the species, there are acute changes of angles within the branches forming the upper crown, and thereby creating notch stresses. A lower limb has been removed at 3-m AGL to the north, resulting in a large diameter stub. The tree forks at 6-m AGL under tension due to the east stem crossing the west stem, with each forming opposite sections of the crown from where they derived on the trunk. The stems make contact at 9-m AGL, with discernible reaction wood forming to create a 'cushion', in accordance with the 'axiom of uniform stress'. The only rib formation is to the north, where an old branch stub acts as a wedge within the fork union. There is notable broadening at the base of the south stem under loading from the prevailing south-westerly wind. There is minor branch tip dieback noted within the crown.	Remove deadwood > 50mm diameter. Redress stub to branch collar. Monitor tree basal decay, crown health and lateral bark crack annually	High	Low	4	4

Tree N.o	Tree Tag	Tree Species	Stem (mm)	Crown Spread	Tree Height (m)	Age Class	Remarks	Recommendations	Target	Bat Habitat	Priority	Photo Ref
							A lateral bark crack is noted on the tension side of the east stem, to the side of a branch stub. Located within garden of the main house.					
14	1680	Coastal redwood (<i>Sequoia sempervirens</i>)	580 (main stem).	M	20	M	This is a multi-stemmed specimen, derived from base. It is a mature stool with early mature coppice growth. This is one of the few conifer species that readily regenerates from cut stools, by producing new shoots. Located within garden of main house.	None	Med	Low	NA	/
15	1681	Sycamore (<i>Acer pseudoplatanus</i>)	590	EM/M	19.5	EM	There is a basal decay wound to the south measuring 200-mm x 150-mm. Using a metal probe the decay extends centrally to a depth of 400-mm (previously this decay was measured at 250-mm depth in 2017). There is, however, significant buttress development occurring in reaction to this decay, to either side of the cavity, but with decay now progressing into these buttresses. Due to the dominant presence of tree 14, the deep, crown is asymmetric and predisposed to the east over the Court House drive.	Remove deadwood. Undertake decay detection testing to map the extent of decay and ascertain its structural integrity. OR Consider coppicing this tree in order to release the Coastal redwood. The sycamore will rejuvenate, by producing shoots from the	Med	Low	3	5 & 6

Tree N.o	Tree Tag	Tree Species	Stem (mm)	Crown Spread	Tree Height (m)	Age Class	Remarks	Recommendations	Target	Bat Habitat	Priority	Photo Ref
							Small and medium diameter deadwood occurs in the crown, and is primarily related to competition shading by the Coastal redwood (T14), and squirrel related browsing damage. Located within garden of main house.	cut stool, to form a multi-stemmed tree, overtime.				
18	1675	Sycamore (<i>Acer pseudoplatanus</i>)	910	L	22	M	The tree forks under tension at 7-m to form two co-dominant stems. An acute angle change occurs on the west limb, proximal to the parent stem, to form a limb that grows southwards. It is noted that the surrounding soil levels are slightly raised around the rooting area, with retaining timber sleeper to the east. Secondary thickening of the stem will soon damage the new timber fencing, as contact is already being made. There are concaved, target cankers likely associated with a <i>Nectria</i> fungal species, noted on the main stem at 2.5-m AGL to the south, and at 5-m AGL to the south and north. An occluding decay wound occurs to the east at 2.5-m AGL, measuring an estimated 300-mm diameter, but the surveyor was unable to ascertain its depth, as the boundary fence restricts access. The wound and canker are noted at 2.5-m AGL on the same axis. Reaction wood is forming to the north and south at 2.5-m AGL, possibly in response to the decay.	Cut top of fence to permit secondary stem thickening without the risk of abrasion damage to the stem. Remove all deadwood, as the owners have a young child who plays in the garden. Undertake a detailed investigation to assess the presence of decay at 2.5-m AGL on the main stem. This may require ladder access via the neighbouring garden, and decay detection testing using a Resistograph Drill.	High	Low	2	/

Tree N.o	Tree Tag	Tree Species	Stem (mm)	Crown Spread	Tree Height (m)	Age Class	Remarks	Recommendations	Target	Bat Habitat	Priority	Photo Ref
							There is small diameter deadwood throughout the crown, at normal levels for the species and age of tree, in association with the process of cladoptosis. Located in garden of Court House.	Monitor annually.				
20	1678	Turkey oak (<i>Quercus cerris</i>)	1270	VL	30	M	This is a magnificent specimen tree of impressive size and spread. There is a decay cavity on the underside of the west primary lateral branch, at 6-m above ground level, under which cars park and turn. There are several pruning pegs, with a large fractured and torn peg at 10-m above ground level, to the southeast following failure of a lateral limb. Subsequently the large diameter south limb no longer benefits from the dampening effect that this neighbouring limb would have offered. The massive, heavily end loaded, lateral limb growing towards the Court House has notable reaction wood at the fork union, with the parent stem.	Remove the lateral primary branch with decay cavity, at 6-m AGL to the west, back to the main limb. Remove minor deadwood to southeast over the Court House. Undertake climbing inspection to assess the structural integrity on the tension (upper) side of the massive lateral limbs. Subject to findings:- Reduce the south and west lateral limbs over the	High	Low	2	8 & 9

Tree N.o	Tree Tag	Tree Species	Stem (mm)	Crown Spread	Tree Height (m)	Age Class	Remarks	Recommendations	Target	Bat Habitat	Priority	Photo Ref
							There is small diameter deadwood throughout the crown, at normal levels for the species and age of tree, in association with the process of cladoptosis. Light pruning has occurred to the west of the crown, primarily to facilitate access for vehicles etc. during renovation work (circa 2016). Located in garden of the main house.	drive/parking area by 2-3m distally. Reduce the lower, lateral north-east limb (towards the Court House) by 3-m distally. Monitor annually.				
21	1696	Horse chestnut (<i>Aesculus hippocastanum</i>)	850	L	22	M	There is a decay wound noted on the northwest buttress considered insignificant at this time. The tree forks at 3-m AGL to form two co-dominant stems, with the eastern stem, soon forking again. This tree has a slightly compressive main fork union formed at 3-m AGL, with narrow columns of slightly pronounced reaction wood, forming ribs. These ribs have recently formed, following the removal of one neighbouring tree (T22 circa 2016) and the pollarding of another (T23 – circa 2022). For the same reason the tree has an asymmetric crown predisposed to the north, although young branch growth is now forming on the south side in response to new light levels, as the competition has been removed. There is also notable, branch extension growth to the north.	Reduce north crown by 2-m distally in an attempt to aid rebalancing of the crown. Sever ivy so the fork remains visible for tree condition inspections. Monitor compression fork. Monitor decay wound.	High	Low	3	10 & 11

Tree N.o	Tree Tag	Tree Species	Stem (mm)	Crown Spread	Tree Height (m)	Age Class	Remarks	Recommendations	Target	Bat Habitat	Priority	Photo Ref
							Crown reduction work has recently occurred (circa 2017) primarily to the west, to remove branches away from the roof of the neighbouring house. Ivy extends into the mid-crown. Located in the garden of the new house, centrally along the original driveway.					
23	1698	Small leaved lime (<i>Tilia cordata</i>)	870	L	32.4	M	This tree has had its rooting area disrupted by landscaping work, undertaken by the previous occupier. Following an assessment of this potential root damage by Steve Ambler & Sons Tree Specialists Ltd (2022), the tree was recently pollarded at 12-m AGL, under written Tree Preservation Order Approval. Young shoot growth is noted in response to this operation. The tree is located in an elevated location within the Lodge House garden.	Monitor the response to pollarding and root loss on an annual basis.	High	Low	4	/

Tree N.o	Tree Tag	Tree Species	Stem (mm)	Crown Spread	Tree Height (m)	Age Class	Remarks	Recommendations	Target	Bat Habitat	Priority	Photo Ref
24	1674	0703 Holly	M	M	M	EM	Located in the Court House garden, just north of T18. A small basal wound was noted to the west. The rooting area has slightly raised soil levels. Slightly compressive fork union at 1-m AGL between the dominant and subordinate stems. A remnant, thick, metal fence wire was noted at 3-m AGL on the subordinate stem. This has now mostly been enveloped through secondary thickening. This has not caused constriction of the stem.	None	Med	Low	4	/

7. RECOMMENDATIONS

- YOU ARE STRONGLY RECOMMENDED TO undertake the works as recommended within the time period given against each priority within the Findings Table (Priority Ratings defined within Section 5).
- All tree works shall be in accordance with the British Standard Recommendations for Tree Works BS 3998: 2010 and industry best practice.
- **Tree Preservation Order:** The trees are protected under a Tree Preservation Order and therefore the following must be adhered too. The recommended work on trees with a works priority rating of 2-4 requires written approval from the Local Planning Authority via a Tree Preservation Order Works Application, prior to any works commencing. This Report should be provided as evidence.
- **Recommended date of next inspection**² - June 2024, and every 12-18 months thereafter.
- ANY LANDOWNER OR LAND MANAGER SHOULD BE AWARE THAT - Trees must receive regular tree inspections by persons with adequate specialist arboricultural qualifications. A landowner has a duty of care imposed by statute and common law to do so and keep records of such (see legal constraints below). For further advice contact www.trees.org.uk
- Tree felling and surgery works should only be undertaken by trained, competent and appropriately certificated personal with adequate experience and public, third party and employers liability insurance to £5,000,000. Always ask for proof from the contractors prior to engagement and seek references where necessary.

NOTE - *There is a duty within law imposed on all landowners' and managers requiring an active programme of tree condition inspections and recording to include all remedial works, to satisfy a Landowner's Duty of Care towards offsetting foreseeable risk that trees within their ownership may pose. In addition, this is likely to be a requirement of the client's insurance. It is strongly recommended that all trees within influencing distance of third - party properties, highways or public space should be inspected to offset any foreseeable risk to third parties or property. Further advice and guidance can be sought from Steve Ambler & Sons Tree Specialists Ltd.*

² All instructions from our client to undertake the physical tree works recommended in Item 7 of this Report will not invoke the future recommended inspection or monitoring. This must be formerly instructed in writing citing the date and title of the Report, the exact items instructed and providing tree references. No liability will be accepted where liabilities arise due to any absence in future monitoring, which is not separately instructed.

8. LEGAL CONSTRAINTS

Tree Preservation Orders and Conservation Area Status in Wales

In Wales, the law on TPOs is in Part V111 of the Town and Country Planning Act 1990 Town and Country Planning (Trees) Regulations 1999. When any tree/s are protected by a TPO or are situated within a Conservation Area, it is an offence (1) cut down (2) uproot (3) top (4) lop (5) wilfully damage or (6) wilfully destruct a tree without the express written permission from the Local Planning Authority (LPA), there are exceptions. An LPA may grant permission, if considered reasonable following the submission of an application for consent to undertake the works, or where in accordance with an Approved Planning Application or under the exemptions within the Town and Country Planning Act 1990 of dead, dying, or dangerous. It is advisable to consult the LPA and an Arborist prior to conducting any tree works under these exemptions.

Felling Licence

A Felling Licence may be required in certain felling operations, and these are administered by the Forestry Commission where more than five cubic metres of wood are felled in one calendar quarter and when selling more than two cubic metres. There are exceptions, and these are in the Forestry Act 1967 and Regulations made under this Act. Contravention of the felling licence controls can incur substantial penalties. Tree felling forming part of a Local Authority Planning Approval is exempt.

Tree work operations have the potential to impact on protected species, most notably birds and bats. **The Wildlife and Countryside Act 1981** is the primary legislation which protect birds in the UK, and it is an offence, with certain exceptions, to intentionally kill, injure or take any wild bird, or intentionally take, damage or destroy the nest of any wild bird while it is in use or being built or take or destroy an egg of any wild bird. Certain species of bird are afforded additional protection, whereby it is an offence to intentionally or recklessly disturb any wild bird included on Schedule 1 of the Act, while it is nest building or at a nest containing eggs or young, or disturb the dependent young of such a bird.

It is not an offence to fell trees during the bird nesting period (which is generally considered to be between mid-February and September inclusive) providing it is done so without breaching the legislation detailed above.

Caution must be aired if tree works are programmed during the nesting season as there is the potential for delay if nesting birds are found to be on site. Should nesting birds be present then all but essential works must be postponed. If in undertaking essential works a nest or nests are found to be present, then further advice must be sought from the statutory nature conservation authority, which in Wales is Natural Resources Wales and in England is Natural England, or from an appropriately qualified ecologist. The penalty for disturbing or destroying one bird or nest can be an unlimited fine and up to six months in prison, or both.

Bats...Summary of Current Relevant Legislation

Bats are also generally associated with trees and can be impacted by tree work operations. There are some 17 species of bat which are known to breed in the British Isles, all are insectivorous and depend to some extent on habitat in which trees are a significant element. Bats are a protected species and are in decline both globally and nationally. Therefore, they are to be fully considered before any tree work commences and particularly if the trees are mature. All species of bats are afforded **full** protection under the **Conservation of Habitats and Species Regulations 2017 (as amended)** and **partial** protection under the **Wildlife and Countryside Act 1981 (as amended)**. It is an offence (with limited exceptions) to deliberately take, injure, or kill a bat, intentionally or recklessly disturb a bat in its roost or deliberately disturb a group of bats, deliberately damage or destroy a place used by bats for breeding or resting (roosts) (even if bats are not occupying the roost at the time) or intentionally or recklessly obstruct access to a bat roost.

Therefore, bats are to be fully considered before any tree work commences and particularly if trees contain veteran features (which can occur in young trees as well as older trees). This can include all work on trees whether it is surgery, felling, the covering, or filling of cavities or the installation of rod braces and flexible cable braces. If a bat roost is known to be in any tree that is to be removed or worked on, or if any work is to take place adjacent to a known bat roost that may result in disturbance to that bat/s, then a license must be obtained from Natural Resources Wales or Natural England before work can take place.

Where there is the risk of a bat roosts being present, it is incumbent upon the owner or manager to commission a specialist bat survey to identify bat roosts before instructing tree surgery to commence. Failure to do so and in the event of breaching the legislation detailed above is an offence.

Maximum penalties for committing offences relating to bats or their roosts can amount to imprisonment for a term not exceeding six months or to fines of up to Level 5 on the standard scale under the Criminal Justice Act 1982/ 1991 (i.e., £5000 in April 2001) per roost or bat disturbed or killed, or to both.

NOTE - This is a simplified summary of the legal position relating to bats and birds and is intended for guidance purposes only. If further assistance is required, the primary legislation should be referred to. It may also be necessary to see legal advice or the advice of an appropriately qualified ecologist.

In the event of disturbing a roost site or injuring any bats is an offence. Maximum penalties for committing offences relating to bats or their roosts can amount to imprisonment for a term not exceeding six months or to fines of up to Level 5 on the standard scale under the Criminal Justice Act 1982/ 1991 (i.e., £5000 in April 2001) per roost or bat disturbed or killed, or to both.

Statute and Common Law – for Tree Inspections.

A landowner or land manager should be aware that both statute and common law dictates regular inspections of trees on land in their control are necessary where such trees could cause injury or damage in the event they should fall or shed any parts. A person suitably qualified in arboriculture should undertake such routine inspections and any remedial tree works recommended should be carried out within the time constraints specified, to prevent injury or damage occurring. A landowner should retain records of all inspections and any remedial tree works that have resulted from such inspections. Arboricultural Association, the Malthouse, Stroud Green, Standish, Stonehouse, Gloucestershire, GL10 3DL. Telephone 01242 522152. www.trees.org.uk are able to provide advice on suitably qualified persons or indeed suitable qualifications a person should hold to undertake qualified inspections.

9. LIMITATIONS OF THIS REPORT

There are occasions when even healthy and completely defect-free trees break or become windblown. This represents a "normal failure rate" which is the price of the lightweight, energy-saving structure that favours the species to compete with others in a cost-effective way.

Every attempt has been made to provide a realistic and accurate assessment of trees and their condition at the time of this inspection. No responsibility can be accepted for damage or injury as a result of the failure of any tree or its parts due to faults not apparent upon a visual inspection carried out at this season, or for faults developing subsequent to the survey. Similarly, no liability can be accepted for the condition of the trees that are obscured in part or by whole (e.g. due to dense ivy or other foliage), nor for any that proved inaccessible to the inspector. Certain features which might provide evidence of ongoing decay or decline (Such as seasonal fruiting bodies, damage to foliage, insect emergence holes etc.) may not be in evidence. Only those features present at the time of inspection could be assessed.

This report is based on the trees circumstances and condition at the time of the survey. It must be recognised that the circumstances may be altered radically over the course of any development process and that such changes cannot be accurately predicted. The report also does not provide any specific long-term management recommendations.

The statements made in this report do not take account of the effects of extremes of climate, vandalism or accident, whether physical, chemical or fire. Steve Ambler & Sons Arboricultural Consultancy & Tree Specialists cannot therefore accept any liability in connection with these factors, nor where the recommended work is not carried out in a correct and professional manner in accordance with current good practice and within a reasonable time. The authority of this report ceases at any stated time limit within it, or if none stated after one year from the date of the survey or when any site conditions change, or pruning or other works unspecified in the report are carried out to, or affecting, the Subject Tree(s), whichever is the sooner.

Unless stated in writing, the inspection shall not include any underground parts of the tree. It does not consider **indirect** damage resulting from the extraction of moisture from shrinkable clay soils by tree roots causing **subsidence** or by **heave** occurring through soil rewetting following removal of trees on this site. Such problems are almost entirely restricted to areas of shrinkable clay soils and as I have **not** considered a soil analysis as part of my present brief, this aspect is **not** addressed at this time.

Unless otherwise stated in writing and in the absence of altered circumstances, a report on the health and safety of a tree or trees cannot be relied on after a period of 12 months. Following such a period, a further inspection is required.

Further and more general report limitations are set out in the authors Terms and Conditions and copies are available upon request.

10. GLOSSARY OF TERMS

Adventitious; Latent or dormant bud on stem or root often invisible until stimulated into growth which occurs from an unusual place i.e. not a twig, leaf or bud.

Adaptive Growth; in tree biomechanics, the process whereby wood formation is influenced both in quality and in quantity by the action of gravitational force and mechanical stresses on the cambial zone (THIS HELPS TO MAINTAIN A UNIFORM DISTRIBUTION OF MECHANICAL STRESS)

Anchorages; in trees, the holding of the root system within the soil, involving the flow of forces from the stem through the branches of the root system to the cohesive root/soil interface.

Arboriculture; the culture and management of trees as groups and individuals, primarily for amenity and other non-forestry purposes.

Architecture; in a tree, a term describing the pattern of branching of the crown or root system.

Assessment; in relation to tree hazards, the process of estimating the risk which a tree or group of trees poses to persons or property (THIS INVOLVES A VISUAL INSPECTION FOR DEFECTS AND CONTRIBUTORY SITE FACTORS, AND SOMETIMES ALSO A DETAILED INVESTIGATION OF SUSPECTED DEFECTS)

Assym; this abbreviation means...asymmetric...and refers to the tree having an asymmetric or unbalanced crown. This is usually preceded by a measurement in metres which provides the extent of crown asymmetry and is measured from the centre of the trunk. It may also have a correlation to the lever arm.

Bark; a term usually applied to all the tissues of a woody plant lying outside the vascular cambium, thus including the phloem, cortex and periderm; occasionally applied only to the periderm or the phellem.

Bole; (trunk) the main stem of a tree below its first major branch

Bracket; in wood-decaying fungi, the type of fruit body produced by many species, plate like to hoof-like in shape and with one side attached to the wood or bark.

Branch; a limb extending from the main stem or parent branch of a tree.

Broadleaf; broadleaved tree; a tree belonging to one of the families of angiosperms i.e. not a conifer or other gymnosperm.

Buttress zone; the region at the base of a tree where the major lateral roots join the stem, with buttress-like formations on the upper sides of the junctions.

Callus; a term with more than one botanical meaning, especially an undifferentiated mass of cells, for example forming on the surface of wounded living plant tissue; also used to describe the fold of differentiated wood and bark forming around a tree wound (*see also* woundwood)

Canopy; the topmost layer of twigs and foliage in a woodland, tree, or group of trees

Chlorosis; an atypical colouring, usually yellowish, of foliage; often a symptom of mineral nutrient imbalance or inadequate root function

Cladoptosis; the shredding of twigs by abscission usually of non-performing or shaded parts that make little or no contribution to energy production.

Crown; in arboriculture the main foliage-bearing portion of a tree

Decurrent; in trees, a system of branching in which the crown is borne on a number of major widely spreading limbs of similar size (*cf.* excurrent); also a term pertaining to certain fungi with toadstools as fruit bodies, whose gills run some distance down the stem.

Defect; in relation to tree hazards, any feature of a tree that detracts from the uniform distribution of mechanical stress, or which makes the tree mechanically unsuited to its environment.

Dieback; the death part of a plant, usually starting from a distal point and often progressing in stages.

Disease; a malfunction in or destruction of tissues within a living organism, usually not taken to include mechanical damage; in trees, usually caused by pathogenic microorganisms.

Distal; within part of a tree or other living organism, the region furthest from the main body of the organism, i.e. towards the tip (*cf.* proximal)

Dominance; in trees, the tendency for a leading shoot to maintain a faster rate of expansion than the lateral shoots; also, the tendency of a tree to maintain a taller crown than its neighbours.

Dysfunction; in woody tissues, the loss of physiological function, especially water conduction.

Energy; the capacity to do work (THROUGH PHOTOSYNTHESIS, GREEN PLANTS ABSORB ENERGY FROM SUNLIGHT AND STORE IT IN THE FORM OF CHEMICAL COMPOUNDS WHICH ARE USED IN ENERGY-DEPENDANT PROCESSES SUCH AS GROWTH)

Extension Growth a growth signature made visible by the termination of apical growth at the end of the growing season leaving a girdle scar.

Failure; in connection with tree hazards, a partial or total fracture within woody tissues or loss of cohesion between roots and soil. (IN TOTAL FAILURE THE AFFECTED PART SNAPS OR TEARS AWAY COMPLETELY. IN PARTIAL FAILURE, THERE IS A CRACK OR DEFORMATION WHICH RESULTS IN AN ALTERED DISTRIBUTION OF MECHANICAL STRESS)

Foreseeable; in tree hazard assessment, pertaining to failure and associated injury or damage which are predictable based on evidence from a tree and its surroundings.

Fungi; organisms of several evolutionary origins, most of which are multi-cellular and grow as branched filamentous cells (hyphae) within dead organic matter or living organisms (WOOD DECAY FUNGI ARE SPECIALISED FORMS WHICH HAVE CO-EVOLVED WITH WOODY PLANTS)

Heartwood; the dead or predominately dead central wood of various tree species whose outer living wood, sapwood, has a finite and pre-determined life span; see also extractives.

Heave; in relation to a shrinkable clay soil, expansion due to re-wetting, sometimes after the felling or root severance of a tree which was previously extracting moisture from the deeper layers; also, in relation to root growth, the lifting of pavements and other structures by radial expansion; also, in relation to tree stability, the lifting of one side of a wind-rocked root plate.

Leader; in a tree, a topmost shoot that has apical dominance.

Lever arm; a mechanical term denoting the length of the lever represented by a structure that is free to move at one end, such as a tree or one of its branches.

Loading; a mechanical term describing the force acting on a structure from a particular source; e.g. the weight of the structure itself or wind pressure.

Mycelium; the body of a fungus, consisting of branched filament (hyphae).

Mycology; the study of fungi.

Occluding tissues; a general term for the wood, cambium, and bark that form around a wound on a woody plant (*cf.* woundwood)

Occlusion; the process whereby a wound is progressively closed by the formation of new wood and bark around it.

Preventive action; in a tree hazard management, action that helps to prevent injury to persons or damage to property.

Probability; a statistical measure of the chance that a particular event (e.g. a specific failure of a tree or a specific kind of harm to persons or property) might occur.

Proximal; in the direction towards the main body of a tree or other living organism (*cf.* distal)

Pruning; the removal or cutting back of twigs, branches or roots; in some contexts, applying only to twigs or small branches only, but more often used to describe all kinds of work involving cutting.

Remedial Action; in tree hazard management, action to remove or mitigate the risk of injury to persons or damage to property.

Resistance; in tree health assessment, the ability of a tree to withstand particular adverse conditions or attack by a specific pest or pathogen.

Risk; the likelihood of the potential harm from a particular hazard becoming actual harm.

Root rot; either a general term for any form of wood decay in roots, or a disease in which fine, non-woody roots are killed.

Root and butt-rot; a form of decay in standing trees, which primarily affects the roots and buttress zone but may also extend up the stem.

Sail area; in arboriculture, a general term for the wind-intercepting area of a tree's crown, which varies both with leaf cover and the orientation of leaves and twigs under different wind conditions.

Sap; a general term for fluids in plant tissues, whether in living cells or in the hollow water conducting cells of the xylem.

Scaffold limbs; the branches, which form the main framework of the crown of a tree with a de-current growth habit.

Shoot; in a tree, the elongating region of a stem or branch.

Shrub; a woody plant, which branches at or near ground level and so, does not have a single trunk.

Significant; in relation to health and safety, pertaining to hazards or risks which are deemed to exceed accepted standards of safety, and which therefore require remedial or preventive action.

Soil heave; *see* heave.

Stem; in a tree, the principal proportion of the woody structure (i.e. the trunk), or one of a number of such portions with similar size and status.

Strength; the resistance of a structure or material to mechanical failure when subjected to a particular type of stress, tensile, compressive, shear, torsional etc.

Stress; in plant physiology, a condition under which one or more physiological functions are not operating within the optimum range, for example due to lack of water, inadequate nutrition or extremes of temperature.

Stress; in mechanics, a force acting on an object, measured per unit area of the object (*cf.* strain)

Stress-notch; a point where mechanical stress is locally concentrated within a structure, sometimes resulting in failure or perhaps stimulating adaptive growth in the case of a living organism.

Subsidence; in relation to soil or structures resting in or on soil, a sinking due to shrinkage when clay soils dry out, sometimes due to extraction of moisture by tree roots.

Subsidence; in relation to branches of trees, a term that can be used to describe a progressive downward bending due to increasing weight.

Targets; in a tree hazard assessment (and with somewhat incorrect terminology), persons or property or other things of value, which might be harmed by mechanical failure of the tree or by objects falling from it.

Tipping; in arboriculture, the removal of the crown of a (usually mature) tree, or of a major proportion of it.

Topping; in arboriculture, the removal of the crown of a (usually mature) tree, or of a major proportion of it.

Tree; a woody plant, which typically has a single main stem and, in maturity, attains a height of at least four metres and a stem diameter at breast height of at least 75-mm.

Tree Preservation Order; in Great Britain, an order made by a local authority, whereby the authority's consent is generally required for the cutting down, topping or lopping of specified trees.

Trunk; the single main stem of a tree.

Vigour; in tree assessment, an overall measure of the rate of shoot production, shoot extension or diameter growth (*cf.* vitality)

Visual Tree Assessment (VTA); in addition to the literal meaning, a system expounded by Mattheck & Breloer (1995) to aid the diagnosis of potential defects through visual signs and the application of mechanical criteria.

Vitality; in a tree assessment, and overall appraisal of physiological and biochemical processes, in which high vitality equates with healthy function (*cf.* vigour)

Wind exposure; the degree to which a tree or other object is exposed to wind, with regard both to duration and velocity.

Wind pressure; the force exerted by wind on a tree or other object.

Wind snap; the breaking of a tree stem by wind.

Windthrow; the blowing over of a tree at its roots.

Wood; secondary xylem; the main structurally supporting and water-conducting tissue of trees and shrubs (*see* also xylem)

Woundwood; wood with atypical anatomical features, formed in the vicinity of a wound; also, a term sometimes used to describe the occluding tissues around a wound in preference to the ambiguous term 'callus'.

11. REFERENCES

Arboricultural Association, Guidance Note 10, Protected Species and Arboriculture

British Standard Recommendations for Tree Work BS 3998; 2010

Fay N, Dowson D, Heliwell R. Tree Surveys, A Guide to Good Practice, Arboricultural Association

Lonsdale D. Hazards from Trees, A General Guide, Forestry Practice Guide

Lonsdale D. Principles of Tree Hazard Assessment and Management.

Mattheck C. & Breloer H. The Body Language of Trees Department of the Environment.

Mattheck.C & Bethge.K, Weber.K – The Body language of Trees – Encyclopedia of Visual Tree Assessment.

12. TERMS AND CONDITIONS

The Parties:

“The Consultant Arboriculturalist” will be Stephen J Ambler or Vaughan Lewis or otherwise the person duly authorised and appointed by Steve Ambler & Sons Tree Specialists Ltd, hereafter referred to **The Consultant**, who is to investigate and report on the arboricultural matter forming the subject of any investigation. “The Client” is the party commissioning and funding the investigation or survey report.

1. The Report is for sole use of the named Client and his/her professional advisors and other persons with a legitimate interest in the management of the trees under investigation. No responsibility is accepted to any persons other than the Client in respect of its contents and conclusions. Neither the Report nor any part of it may be published, broadcast or otherwise distributed to the general public in any form without the express written consent of the Consultant.
2. Payment Terms - The Client shall pay the Consultant a fee for preparing the Report, based upon an hourly rate to be determined from time to time (the relevant rate available on request), unless a fixed price quotation has been offered and accepted prior to engagement. In addition, all reasonable out of pocket expenses incurred will be payable, as will any VAT due on the fee and expenses. The total sum due must be paid within 28 days of the date of invoice, unless otherwise agreed in writing by the Consultant. If the payment of any sum due is delayed The Consultant shall be entitled to charge interest at the rate of 4% above the base rate of the Bank of England for the time in force on the overdue amount and/or suspend performance of the Consultancy Services provided that the Consultant shall not suspend performance unless it shall have given to the Client written notice requiring payment of the overdue sum within 7 days and the Client shall have failed to comply with such a notice.
3. If any part of an invoice is disputed or queried by the Client, the Client shall notify the Consultant of the details of such dispute or query not less than 10 days prior to the due date of payment and of its intention to withhold payment. The payment of any undisputed part of the invoice shall not be delayed.
4. The Consultant retains full title on any report until the fee is paid in full: No liability whatsoever is accepted on the contents of any report where the due fee remains unpaid in part or in full. The consultant reserves the right to withdraw Reports where full payment is not received within the payment terms.
5. The Consultant will carry out the inspection and investigations as specified in the Clients Instructions and/or as set out in the Consultant’s preliminary proposals. Unless otherwise specified, inspections will comprise Visual Tree Assessments made working from ground level only. The Consultant will not be expected or required to carry out any further investigations or inspections unless such investigations/ inspections are agreed between the Consultant and Client.
6. The Inspection will be limited to those areas or trees included in the Clients instructions that are practically accessible and safe for inspection. The Client must ensure that free and lawful access is available; the Consultant is under no obligation to inspect areas that are unexposed, inaccessible or potentially hazardous.
7. Unless stated in writing, the inspection shall not include any underground parts of a tree, nor will it consider any possible effects of root action upon shrinkable soils. Unless the Report is specified to include a Subsidence Risk Assessment, or an investigation of roots in relation to drainage systems, no liability is accepted for any loss or expense incurred consequent upon such effects.
8. The Report will be prepared with the care and diligence to be reasonably expected of a professional Consultant Arboriculturalist, with due account taken of any and all limitations specified in the instructions. No responsibility is accepted to comment on subjects or circumstances other than those specified in the Client’s instructions, nor for matters beyond the professional competence of a Consultant Arboriculturalist.
9. The Consultant shall provide his opinion on Arboricultural matters as agreed with the Client. It may be recommended that other specialists (e.g. Structural Engineer, Soil Scientist, Drain Engineer) be required to carry out further investigations. The Consultant accepts no liability in respect of matters on which the Client is recommended to obtain such other specialist advice, nor if the Client acts without obtaining, or in contradiction of, such advice.
10. Trees and their environments change over time; No liability is accepted for events arising as a result of circumstances not apparent at, or developing subsequent to the inspection, unless such circumstances are specifically brought to the attention of the Consultant by the Client or his/her agents. Unless otherwise stated, and in the absence of altered circumstances, any Report issued is valid for a period of 12 months only.
11. Any claim by the Client based on an alleged defect in the scope, nature or quality of a Report shall be notified to the Consultant within 14 days of the date of the supply of that Report. Should any problem allegedly arise relating to a tree (or other matter) the subject of a submitted Report, any claim must be notified to the Consultant within 14 days of the alleged problem becoming apparent.
12. Any dispute arising out of or in connection with the contract between the Client and Consultant shall be referred to the arbitration of a single Arbitrator appointed by agreement between the parties, or in default of agreement, nominated by the Arboricultural Association upon the application of either party.

13. The Consultant shall not be liable to the Client for any consequential loss arising in any way from the negligence of the Consultant or his employees or agents or otherwise.
14. The Consultant shall not be liable to the Client or be deemed to be in breach of the contract by reason of any delay in performing, or any failure to perform, any of the Consultant's obligations in relation to the services he renders, if the delay or failure was due to any cause beyond the Consultant's control.
15. Each provision of these conditions limiting or excluding liability operates in itself and survives independently of the others.
16. The Laws of England and Wales shall govern the contract between the Client and the Consultant.
17. Only reports signed by hand or digitally by the Consultant are valid.
18. In respect of Tree Surveys and Inspections, the client is advised to review the survey boundary (red polygon) as indicated on the Tree Location Plan located in the Appendices, to confirm the area surveyed meets their requirements. The client must advise Steve Ambler & Sons Tree Specialists Ltd immediately, in writing, where any discrepancies occur and where additional areas require surveying, they should be clearly identified by a site location plan (subject to our standard hourly fee rate and mileage rate, as applicable) .

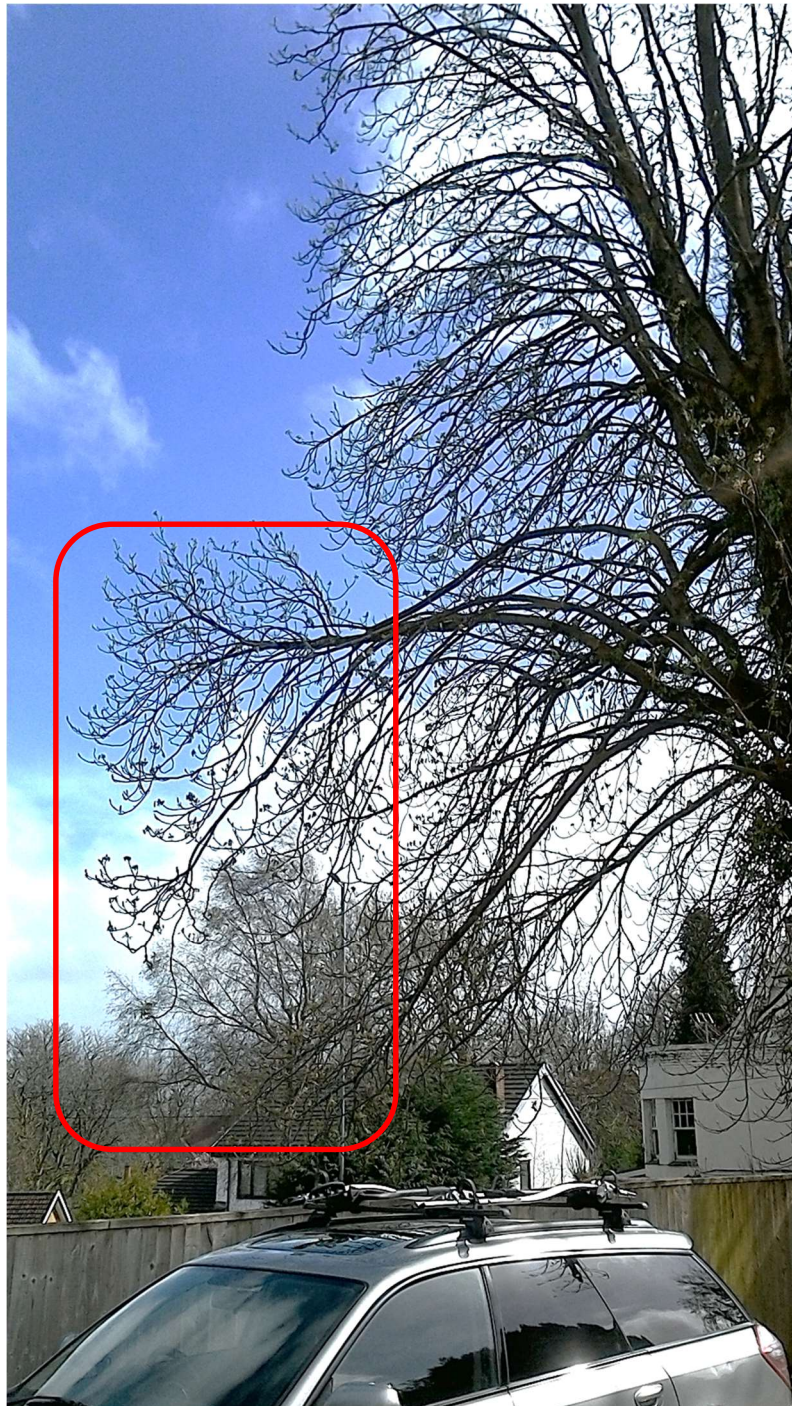
APPENDICES

PHOTOGRAPHS

TREE LOCATION PLAN

PHOTOGRAPHS

Photograph 1. Tree 2 - The lateral and descending branches to the east overhang the neighbouring property. The limbs formed at 6-8-m AGL extend beyond the main crown by some 3-m.



Photograph 2. Tree 6 - There is a decay cavity at 4-m to the north, an ascending pocket of decay. A small downward facing cavity also occurs to the south at 4.5-m AGL potentially coalescing. There is an upward facing cavity in the pollard knuckle on the inner side of the east stem.



Photograph 3. Tree 7 - A small decay cavity occurs on the tension side of the lower arching limb, over the Court House driveway. There is notable reaction wood suggesting significant decay.



Photograph 4. Tree 12 - The tree forks at 6-m AGL under tension due to the east stem crossing the west stem. The stems make contact at 9-m AGL , with discernible reaction wood forming to create a 'cushion' .



Photograph 5. Tree 15 - There is a basal decay wound to the south. A metal probe extends to a depth of 400-mm (previously this decay was measured at 250-mm depth in 2017).



Photograph 6. Tree 5 (left). Asymmetric crown predisposed to the drive of the Court House, with the dominant Coastal redwood (T14 - right).



Photograph 7. Tree 3 – Structurally weak, main fork formed under compression, with the crown displaying the early symptoms of Ash dieback disease .



Photograph 8. Tree 20 – decay cavity on primary branch over parking area/ turning circle.



Photograph 9. Tree 20 – Reaction wood at fork union of north-east lateral limb that extends over the Court House grounds.



Photograph 10. Tree 21- Slightly compressive main fork union, with elongated, shallow rib formation.



Photograph 11. Tree 21 – Asymmetric crown predisposed to the north (house). Formally this tree was part of a group of three, and has since lost the protection of its neighbouring trees.



TREE LOCATION PLAN

