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1.0 – Summary of Instruction

An arboricultural survey was commissioned to be undertaken at the above address by our client, for building insurance purposes.

The tree survey and subsequent report are intended to provide an above ground assessment of the significant trees growing within the boundaries of the property. Only those trees which fall within the management responsibility of our client were individually recorded.

The tree inspection survey was undertaken utilising Stage 1 of the Visual Tree Assessment (VTA) method of inspection. (See Section 1.1).

The VTA assessment allows for recommendations to be made where necessary, to ensure the trees are managed accordingly, based on sound arboricultural principles concerning urban trees.

Instructions were to:

- Carry out an above ground Visual Tree Assessment (VTA) of the significant trees growing within the boundaries of the property.
- Produce a written report detailing the trees' species, dimensions, age class, physiological and structural condition.
- Make recommendations for any necessary tree surgery work required to the trees in the interest of sound arboricultural management, including reasons for the suggested work.

The tree survey has been undertaken in accordance with the above instructions as requested by our client's insurance provider:

The report is to include all relevant tree data as well as recommendations and priority timescales for any necessary remedial tree surgery work, if required.

1.1 – Visual Tree Assessment (VTA)

The Visual Tree Assessment (VTA) method of inspection is an internationally recognised tree hazard assessment method developed by Prof. Claus Mattheck: *Body Language of Trees – a handbook for failure analysis (HMSO, 1994)*.

The basis of VTA is the identification of (external) symptoms which a tree produces in reaction to a weak spot or area of mechanical stress. These can then be interpreted in terms of potential direct impact hazard features within a tree.

The VTA method of inspection does not allow for firm opinions to be made concerning the risk of a tree's potential to cause indirect impact on nearby structures. Indirect impact refers to potential problems caused by changes in soil moisture content in shrinkable soils (i.e. those soils with a high clay content); to which trees can be a contributing factor.

The tree inspection survey undertaken at the above site was conducted in accordance with Stage 1 of the VTA process.

1.2 – Visual Tree Assessment (VTA) in a Seasonal Context

There are both advantages and disadvantages to carrying out VTA assessments in summer versus the winter:

Spring/Summer

Advantages: Vitality can be easily assessed and deadwood is clearly visible.

Disadvantages: Trees in full (heavy) leaf (e.g. Lime) can obscure assessment of branch/trunk defects. Pathogenic fungal bodies are not always present at this time of year.

Autumn/Winter

Advantages: Branch/trunk structure more readily visible from the ground and pathogenic fungi are best spotted at this time of year.

Disadvantages: Vitality is not so readily assessed and deadwood is not so easily identifiable.

For these reasons, spring/summer and autumn/winter VTA assessments are best alternated.

2.0 – Report Limitations – (The scope of this report is restricted by the following limitations)

- *All observations were from ground level, a visual assessment of external features only, assisted (as required) by the use of binoculars, a metal probe for inspection of cavities, splits etc. and a rubber sounding mallet for audible resonance testing. All trees were assessed utilising Stage 1 of the Visual Tree Assessment (VTA) method of tree inspection. (See Section 1.1).*
- *Below ground tree roots and buried parts were not inspected.*
- *Detailed background information is not known concerning the past history of the site, the soil type, geology or hydrology of the environs.*
- *No inspection material (such as a subsoil sample to determine the plasticity index of the clay soil) has been assessed by a laboratory.*
- *No data regarding the soil environment or plasticity index of the soil at the site has been made available.*
- *No opinion is offered in respect of any trees potential contribution to indirect impact to structures situated at or adjacent to the property.*
- *Assessing the potential influence of trees upon load-bearing soils beneath existing and proposed structures, resulting from water abstraction by trees on shrinkable soils, was not included in the contract brief and is not, therefore, considered in any detail in this report. Tree Sense Arboricultural Consultants cannot be held responsible for damage arising from soil shrinkage or heave issues related to the retention or removal of trees on site.*
- *Weather conditions were dry and bright at the time of the survey.*
- *All assessments of any previous tree management are approximate based on the current appearance of the tree surveyed.*
- *Tree heights have been estimated to within 1m.*
- *Stem diameters have been measured where accessible to within 50mm.*
- *The Tree Position Sketch Plan is not drawn to scale and provided only to show the approximate tree positions for cross reference purposes with the Individual Tree Data Table 5.0.*
- *Where a tree is subject to a Tree Preservation Order (TPO) and/or stands within a designated Conservation Area, it will be necessary for the tree owner or his/her appointed agent to ensure appropriate compliance with planning requirements, before any recommended, non-urgent treatments can be undertaken. (See Section 9.0)*

2.1 – Time Limits

It should be understood that trees are not static objects, but growing, living organisms; and their condition, size and relationship to buildings, structures and other trees can change significantly and sometimes unpredictably over a period of time. Therefore this report has a maximum validity period of 12 months from the date of publication unless a more recent report is published within this period which will supersede this report. The validity of the report is also subject to all management recommendations being undertaken to standards detailed in section 7.0 and within the advised time frames.

Re-inspection should be undertaken at regular intervals as set out in this report.

2.2 – Severe Weather Limitations

Impacts of severe drought, storm, inundation, flooding, subsidence or land slip are not covered by this report.

3.0 –Background and General Observations

Instructions were received from our client following confirmation with their insurers, to undertake a full survey of significant trees growing within the boundaries of the property.

The tree assessment survey is conducted on an annual basis, with interim assessments undertaken only at the request of the client. (See Section 8.0).

The tree assessment survey and report is revised on an annual basis to ensure that the trees are inspected at regular intervals for their physiological and structural condition, and to ensure that any tree surgery recommendations are undertaken when necessary in the interests of sound arboricultural management. No opinion is given in respect of potential for indirect impact on structures by tree root activity (I.e. moisture extraction from soil by tree roots).

This revision of the survey at 11 Linksway follows re inspection of all the trees and hedge groups within the boundaries of the site on 7th August 2017, to provide an up to date assessment of tree conditions and include any necessary management recommendations.

The previously published report was:

- Report *THA_11LW_HCA_002* (which was produced following the assessment survey conducted in March 2016).

This report (*THA_11LW_HCA_003*) provides the latest assessment of the tree stock, following a reassessment survey conducted on the 7th August 2017.

The Tree Position Sketch Plan in Section 4.0 and the Tree Survey Data Table in Section 5.0 have been updated to reflect the findings of the most recent tree assessment survey.

Since the previous survey in March 2016, T7 has now been removed, which was in physiological decline and the recommendation made to have the tree removed has been undertaken.

Within the boundaries of the property, ten individual significant trees were assessed.

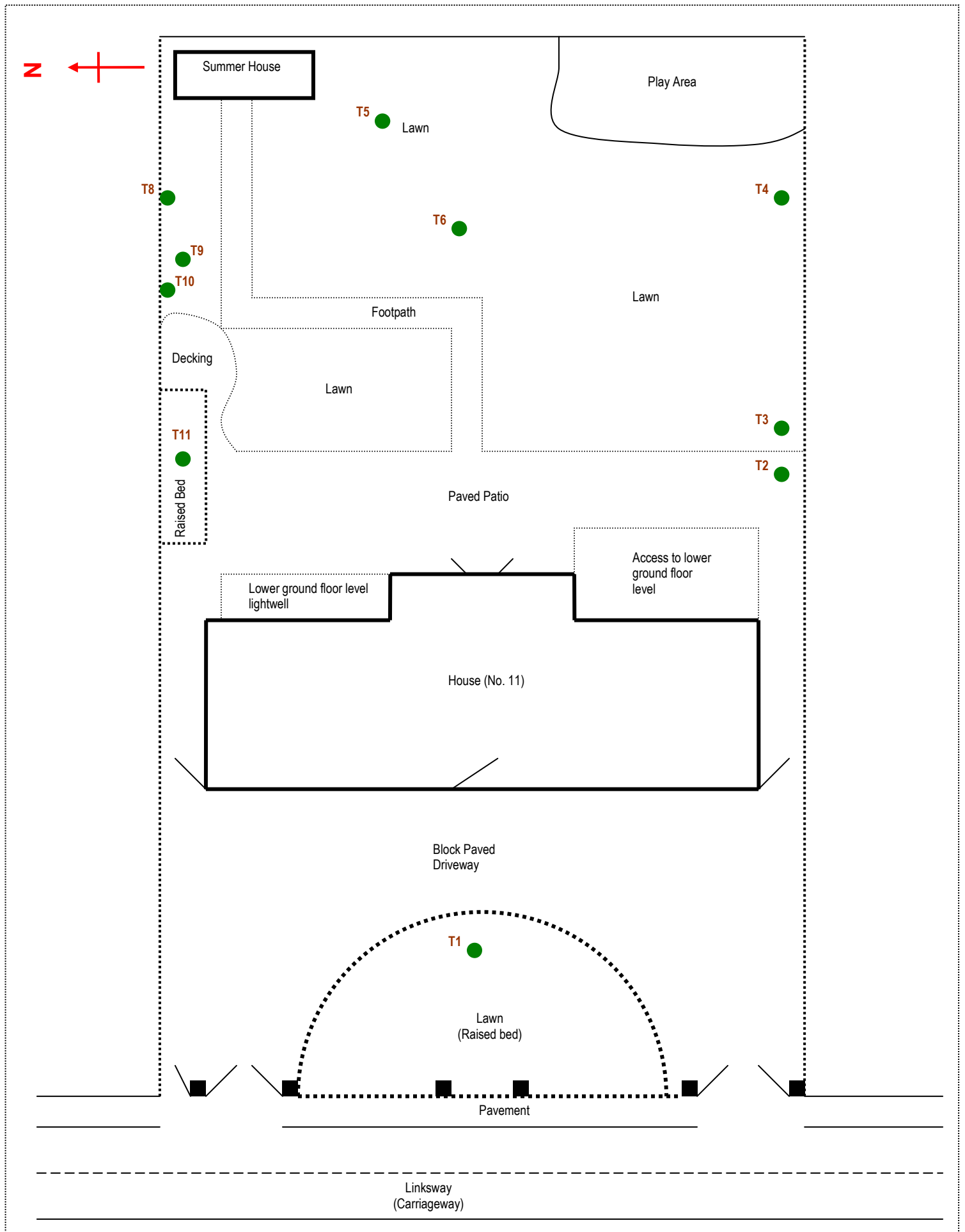
Details of all the surveyed individual trees at the site can be found in Table 5.0 below. Information relating to on site hedge groups can be found in Section 5.1.

The positions and numbering of the surveyed individual trees are provided in the Tree Position Sketch Plan in Section 4.0. Tree numbers remain unaltered since the removal of T7, to ensure continuity with previously published reports.

The plan is not drawn to scale and provided only to allow each tree to be identified and cross referenced with comments and management recommendations provided in the Individual Tree Data Table 5.0 below.

This report revision (*THA_11LW_HCA_003*) supersedes all previously published reports which are now invalidated.

4.0 – Tree Position Sketch Plan - (Not to Scale)



Tree Position Sketch Plan (Not to scale) Notes

The above sketch plan is for illustrative purposes, provided only to indicate the position and numbering of the surveyed individual trees within the property boundaries and is not drawn to scale.

5.0 – Individual Tree Data Table

Tree No.	Species	Height (m)	Stem Diameter (mm)	Crown Spread (m)	Crown Height (m)	Age Class	Physiological Condition	Structural Condition	Comments	Recommendations	Priority
T1	<i>Quercus robur</i> (English Oak)	20	700	N - 7 E - 7 S - 7 W - 7	8	M	Good	Good	Minor deadwood visible sporadically throughout the crown. Well balanced crown, good structural crown framework. Past management undertaken to a good standard. Epicormic growth on south and east sides of the stem @4 – 8m	None at the time of the survey.	F
T2	<i>Carpinus Betulus</i> (Hornbeam)	13	1 – 150 2 – 250 SE - 300	N - 4 E - 4 S - 3 W - 3	4	Y	Good	Poor	Larger stem co-dominant from approx. 2m. Smaller stem grown through the crotch of the co-dominant stems and fused together. Included bark visible. Similar conditions visible in the scaffold framework of the crown. Minor cracking below the stem unions indicating possible weakness and stem separation. Likely to worsen as stems secondary thicken increasing the risk of failure.	Consider removal following re-assessment in 12 months, if structural condition deteriorates. (Target Assessment: garden and patio area)	E
T3	<i>Laburnum anagyroides</i> (Laburnum)	14	375	N - 7 E - 4 S - 5 W - 4	4	SM	Fair	Fair	Vitality ok, foliage slightly sparse with minor dieback at the branch tips. Some minor deadwood in the crown. Small split/wound in the bark on the north side at 300mm above ground level. Good occluding wound wood. Bark and cambium damage on the east side of the stem. Reaction wood appears to have compartmentalized where it is suspected that a foreign body was attached to the tree in the past. (i.e. old washing line, hook or attachment on the tree). Loose bark / delamination on west side of the stem @0.5 – 1m. Sounding hammer tests suggests sound sapwood and heartwood around these areas. (Re-tested August 2017). Surface roots observed in the lawn close to the tree on the north side.	Consider removal following re-assessment in 12 months, if physiological condition deteriorates. (Target Assessment: garden and patio area) Avoid lawn moving over surface roots in the lawn to prevent damage to root bark.	E A

Tree No.	Species	Height (m)	Stem Diameter (mm)	Crown Spread (m)	Crown Height (m)	Age Class	Physiological Condition	Structural Condition	Comments	Recommendations	Priority
T4	<i>Quercus robur</i> (English Oak)	20+	550	N - 8 E - 8 S - 2 W - 7	9	M	Good	Good	Crown suppression on the south side of the tree due to neighbouring tree competition. Minor deadwood visible in the crown. Hazardous major deadwood now removed as per recommendation made in previous report (2015). Loose bark on the northwest side of the stem; sounding hammer test suggests sapwood & heartwood intact. (Re-tested August 2017). Soil de-compaction works not undertaken as recommended in the addendum report <i>THA_11LW_HCA_002_ADD</i>, following a mid summer inspection in August 2016. However, T4 vitality ok and foliage production ok.	None at time of survey.	F
T5	<i>Quercus robur</i> (English Oak)	18	500	N - 6 E - 5 S - 6 W - 7	7	M	Good	Fair	Some minor sized deadwood visible in the crown. Well balanced crown framework.	None at time of survey.	F
T6	<i>Cedrus Atlantica</i> (Atlas Cedar)	18	450	N - 6 E - 5 S - 5 W - 5	7	SM	Good	Good	Some minor deadwood visible in the crown. Well balanced crown, good straight tapering stem. Well established with good buttress roots.	None at time of survey.	F
T8	<i>Crataegus monogyna</i> (Hawthorn)	9	150	N - 2 E - 3 S - 2 W - 1	4	Y	Good	Good	Small tree, slow growth habit (which is a species characteristic).	None at time of survey.	F
T9	<i>Carpinus betulus</i> (Hornbeam)	13	225	N - 7 E - 6 S - 4 W - 1	5	Y	Good	Fair	Co dominant stem on east side removed at 300mm above base level. Sounding hammer test and probe test in the crotch union ok. Distinctive north and east side crown dominance due to suppression by T10 Minor deadwood visible in the crown. Majority of crown spreads north and eastwards over boundary fenceline.	None at time of survey.	F
T10	<i>Quercus robur</i> (English Oak)	17	400	N - 5 E - 5 S - 5 W - 4	4	SM	Good	Fair	Some minor deadwood visible in the crown. Vitality ok, foliage production ok.	None at time of survey.	F

Tree No.	Species	Height (m)	Stem Diameter (mm)	Crown Spread (m)	Crown Height (m)	Age Class	Physiological Condition	Structural Condition	Comments	Recommendations	Priority
T11	<i>Quercus robur</i> (English Oak)	18	700	N - 10 E - 7 S - 10 W - 10	8	M	Good	Fair	Growing in a raised bed on the north side of the rear garden close to the patio. Well balanced crown. Major and minor deadwood visible in the crown including large dead branches overhanging the garden and patio area. Soil de-compaction works not undertaken as recommended in the addendum report <i>THA_11LW_HCA_002_ADD</i>, following a mid summer inspection in August 2016. However, T11 vitality ok and foliage production ok.	1 - Crown clean to remove all hazardous deadwood in a controlled manner.	A

Key to Table 5.0

- 1) Height describes the height of the tree from ground level in metres
- 2) Stem Diameter is the Diameter of the trunk in millimetres at approx 1.5m from ground level. For multi stemmed trees, a single stem diameter equivalent (SE) is calculated and indicated beneath the measurements of each separate stem. (EST.) indicates the stem diameter was estimated due to the tree being inaccessible to measure.
- 3) Crown Spread is the radius of branch spread from the centre of the tree in the direction of each cardinal point in metres
- 4) Crown Height is the distance between the lowest crown branches / foliage and the natural ground level in metres
- 5) Life Stage is represented as: Y= young (in first third of life expectancy), SM = Semi Mature (in second third of life expectancy), M= Mature (in final one third of life expectancy). Trees considered to be beyond their likely life expectancy are normally classed as OM = Over Mature or V = Veteran.
- 6) Physiological Condition indicates a grading for the biological health and vitality of the tree
- 7) Structural Condition indicates a grading for the mechanical integrity of the tree, its stem and the crown framework
 - Major deadwood = greater than 25mm in diameter
 - Minor deadwood = less than 25mm in diameter

Priority key:

- A = Immediate
- B = Within 3 Months
- C = Within 6 Months
- D = Within 12 Months
- E = After 12 Months
- F = No Action Required (before annual re inspection)
- G = Non urgent – Client discretion

N.B – All tree data in the above table has been updated to reflect the findings of the most recent inspection survey. In this instance, the provided data relates to the inspection survey conducted on 7th August 2017, for the purposes of this report publication, (THA_11LW_HCA_003).

5.1 – Tree Survey Data Notes

The following reasons are given to explain why the recommendations have been made in Table 5.0 above:

- 1) To ensure all hazardous major sized deadwood and dysfunctional branches present within tree crowns are removed in a controlled manner, to reduce the risk of falling deadwood causing personal injury or property damage in high target areas;
- 2) To make correct finishing cuts where branches have broken off and old stubs remain. Correctly positioned finishing cuts will assist the tree in occluding the wounds;
- 3) To remove structurally impaired trees and trees which exhibit significant symptoms of poor physiological health which as a result pose an unacceptable risk of failure in high target areas. *(T2 and T3 are both exhibiting structural and physiological issues, to be re-assessed in 12 months time before a decision on their removal is made).*

The recommendations in Table 5.0 above are made in the interests of sound arboricultural management as detailed above.

The property is situated within a Conservation Area and Tree Preservation Orders (TPO) are understood to be in force at the site.

Any tree removal or live growth pruning recommendations (if made) must only be undertaken after following the correct procedures concerning work to TPO and Conservation Area Trees. (See Section 9.0).

Permission from the local authority is not required to undertake the tree management recommendations made in table 5.0 for deadwood removal only. It is not a legal requirement, but considered good practice to inform the local authority of the intended deadwood removal works from TPO trees or trees situated within a Conservation Area. (See Section 9.0)

5.2 – Tree Management Responsibilities

All parties should also be aware that tree owners have a legal obligation to manage trees which are growing on their property. For example, under the Occupier's Liability Act (1957/84) both invited and uninvited visitors are owed a duty of care by the owner if:

- The occupier/owner is aware of the danger, or has reasonable grounds to believe it exists;
- The occupier/owner knows or has reasonable grounds to believe that the visitor / non-visitor is in the vicinity, or may come into the vicinity, of the danger concerned;
- The risk is one against which he may reasonably be expected to offer the visitor / non-visitor some protection.

In short, "land owners / occupiers must ensure, as far as is reasonably practicable, that all reasonable steps have been taken to ensure that no reasonably foreseeable harm befalls anyone who one could reasonably expect to be injured, through their act or omission".

In the context of tree ownership therefore, if a tree is obviously dangerous for some foreseeable reason, the owner must:

Ensure timely removal or reduction of the danger to an acceptable level. If the owner does not possess sufficient technical knowledge to decide if a tree is in fact dangerous or not, they must employ someone with sufficient knowledge to advise them.

Further Statutory Law concerning trees and their management applies in other legislation, some of which are listed in Section 9.0 below.

These include subjects such as tree surgery work to trees which are protected under Tree Preservation Orders (TPO) or to trees situated within a Conservation Area and the protection of wildlife and habitat.

6.0 – Report Summary

The reassessment tree survey was undertaken on the 7th August 2017, in line with instructions received from the property owner and as required by their buildings insurers.

Following the tree survey it was identified that there is a need for tree surgery work to be undertaken on some of the trees inspected at the property.

In the interests of good arboricultural management and in consideration of hazard and risk factors associated with the trees, suggestions have been made to have tree surgery work undertaken to varying degrees and with varying priorities.

T2 and T3 both exhibit structural defects and a decline in physiological health. However, both trees are desired to be retained by our client if possible and therefore, will be reassessed at the regular inspection interval in 12 months time before a decision is made on their potential removal.

The relevant permissions will need to be obtained from the local authority if non emergency tree surgery work is to be undertaken on any trees which are subject to a Tree Preservation Order (TPO). (See Section 9.0).

Six weeks notice of intent must be given for non emergency tree surgery work to be undertaken on trees situated within a designated Conservation Area. (See Section 9.0)

This report publication (*THA_11LW_HCA_003*) supersedes and invalidates all other reports issued prior to the published date shown on the Title Page.

7.0 - Tree Work Standards

The recommendations made within this report have been done so in the interests of sound arboricultural management and to ensure tree surgery works are performed to a professional standard in accordance with *BS 3998:2010 Tree work - Recommendations* (As updated).

All remedial tree surgery work which is suggested in this report must be undertaken to conform to standards and procedures set out in *BS 3998:2010 Tree work - Recommendations* (As updated).

- Tree Sense Arboricultural Consultants are happy to recommend a trusted tree surgery contractor if required, to ensure that all recommended tree surgery work is performed to a high standard.
- Tree Sense Arboricultural Consultants only recommend contractors who are approved by The Arboricultural Association to ensure that the highest standards of tree surgery work are met at all times.

8.0 – Re-inspection

It is advisable to have the trees inspected at regular intervals. A period of 12 months between inspections is recommended unless alternative re-inspection timeframes have been made in the Tree Data Table 5.0, or in Section 5.1.

Inspection of trees should be undertaken at regular intervals by a competent person. It is recommended that re inspection should occur annually from the published date of this report; with interim hazard checks following periods of likely stress (e.g. after severe weather, tree damage, site alterations etc). *Interim checks are actioned only at the client's request.*

Regular inspection is beneficial to ensure the trees are checked for their health and condition to ensure compliance with legal responsibilities as tree owners. Regular tree inspection is also recommended to ensure that trees are managed correctly in accordance with *BS 3998:2010 Tree work - Recommendations*. (As updated)

9.0 – Legal and Planning Consents

- Appropriate legal and planning consent must be gained before undertaking any non emergency tree work if the tree(s) are subject to a Tree Preservation Order (TPO).
- Permission must first be obtained in writing from the Local Authority before commencement of any non emergency tree surgery works.
- Permission is not required for emergency tree work on dead, dying or dangerous TPO trees, including hazardous deadwood removal from tree crowns. However, the Local Authority should still be advised of any proposed remedial work to the trees.
- Six weeks notice of intent is required to be given to the local authority via a Section 211 Notice for any proposed non emergency tree surgery work on trees situated within a designated Conservation Area.
- The period of six weeks must be given for the Local Authority to decide whether the works are permissible or if a TPO is to be enforced.
- Permission is not required for emergency tree work on dead, dying or dangerous trees situated within a Conservation Area, including the removal of hazardous deadwood from tree crowns. However, the Local Authority should still be advised of any proposed remedial work to the trees.
- Tree owners have a responsibility as a common law duty of care as well as responsibilities under statutory law, to ensure that trees growing within the boundaries of their property are suitably maintained to minimise the potential for harm befalling other people or property.
- In the course of undertaking any tree work, the client is advised to ensure that operational assessments and procedures are in place, and to take due consideration of the legal requirements which concern trees and their management.
- Key legislation includes (but is not restricted to):
 - The Wildlife and Countryside Act (1981)
 - Occupiers Liability Act (1957/84)
 - Highways Act (1980/86)
 - Town and Country Planning Act (1990/Regulations 1999/Amendment 2008/09)
 - The Countryside Rights of Way Act (2000)
 - The Conservation (Natural Habitats etc.) Regulations (1994)
 - The Badgers Act (1992)

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