

Report No: LTM0132.VTA.01

Date: 13/11/2020

Project: 50 Lancaster Lane, Leyland, Lancashire, PR25 5SP

Tree Health & Risk Assessment

Inspection Record

Date of Inspection	Surveyor
04/11/2020	Matthew Lally. FdSc MArborA

Lally Tree Management

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Revision	Date	Prepared by	Status
Final	13/11/2020	M. Lally	Complete

1.0 INTRODUCTION

1.1 Professional Details

1.1.1 My name is Matthew Lally and I have been working and studying in the Arboricultural Industry for over 16 years. I have many years practical experience as an arborist and professional experience as a consulting arboriculturalist.

1.1.2 I so far hold the following Arboricultural qualifications and technical memberships:

- FdSc Arboriculture
- LANTRA Profession Tree Inspection Certificate
- VALID - Validator
- Associate Member of the Institute of Chartered Foresters
- Professional Member of the Consulting Arborist Society
- Professional member of the Arboricultural Association

1.2 Tree Condition Assessment (VALID Approach)

1.2.1 This report was commissioned by Mr John Flaye and its purpose was to carry out a site visit and to make a visual assessment of one Oak tree standing within the grounds of 50 Lancaster Lane, Leyland, Lancashire, PR25 5SP as shown on the site plan in Appendix Two.

1.2.2 This health and safety assessment has been completed using the VALD approach to risk management. Full details have been made available in Appendix 3 of this report. The trees conditions and recommendations for management should be read in conjunction with the data tables of Appendix One and site plan of Appendix Two.

1.2.3 The survey on which the findings of this report are based was undertaken on 04/11/2020.

1.2.4 A Basic Assessment was undertaken on all trees from easily accessible ground by foot (A description of the basic assessment can be found in appendix 3). At the basic assessment level, we aim to find trees with obvious features where the risk might not be Acceptable or Tolerable.

1.2.5 We'll carry out a Detailed Assessment on these trees. Unless individual trees have been picked out for a Detailed Assessment, the risk will be recorded as Acceptable at this Basic Assessment level. Further details of the levels of assessment can be found in appendix 3.

1.2.6 Any Detailed assessments will be reported using the VALID App software and a copy of the report will be available in appendix 4

1.2.5 All comments and recommendations have taken into account the location of each tree, their surroundings and their likely impact on persons or property.

1.2.5 The limitations of this report are restricted to the persons, time, information made available and purpose for which this report has been prepared.

1.3 Capital Asset Valuation of Amenity Trees (CAVAT)

- 1.3.1 CAVAT provides a method for managing trees as public assets rather than liabilities. It is designed not only to be a strategic tool and aid to decision-making in relation to the tree stock as a whole, but also to be applicable to individual cases, where the value of a single tree needs to be expressed in monetary terms
- 1.3.2 Therefore there are two versions of the CAVAT method. The Full method is recommended for use in decisions concerning individual trees or groups, when precision is required, and sufficient time is available for a full assessment. The Quick method is intended specifically as a strategic tool for management of the stock as a whole, as if it were a financial asset of the community.
- 1.3.3 Canopy calculations are based on a two-dimensional canopy calculation derived from the tree survey plan are to be viewed as estimates.
- 1.3.4 The current unit value factor (UVF) is £16.26.

2.0 FINDINGS

- 2.1 The tree was visually assessed and given an identification number which is marked clearly on the site plan. The results are clearly described in the data tables of Appendix One and site plan of Appendix Two.
- 2.2 To give assistance in reading the findings the following glossary has been produced.

Arboricultural Glossary of Terms

The following terms are concurrent with best Arboricultural practice and within the guidelines set by the International Society of Arboriculture (ISA), the Arboricultural Association (AA) and the British Standards Institute (BSI).

Age Range: Age is site specific and categorised:

Young (Y)	Newly Planted trees that have not yet established
Semi-Mature (SM)	Established trees up to 1/3 of expected height, stem girth and crown spread
Early Mature (EM)	Between 1/3 and 2/3 of expected height, stem girth and crown spread
Mature (M)	Between 2/3 and full expected height, stem girth and crown spread
Fully Mature (FM)	Full expected height, stem girth and crown spread
Over Mature (OM)	Exceeding life expectancy & Evidence of die back in crown.
Senescent (S)	In advanced stages of decline

Height: Height was estimated and recorded in five metre intervals such as: 0-5, 6-10, 11-15, 16-20, 21-25 and 26+

T/G/W/H - T = Tree. G = Group. W= Woodland. H = Hedge

Condition: Assessment of current physiological and structural condition incorporating vigour and vitality. Condition is to be categorised as follows:

- A – Tree needing little, if any attention
- B – Tree with some risk features, or in the early stages of physiological stress
- C – Tree with significant risk features and/or extremely stressed
- D – Tree that is dead, biologically/physically moribund or dangerous

Priority Rating:

Priority Rating		
1	Immediate	Action should be taken immediately
2	High	Works should be undertaken within 4 weeks
3	Moderate	Work should be implemented in a programme of works (within 6 months, unless otherwise stated).
4	Low	Work that would benefit the trees or other issues. Work not considered essential but should be implemented if funding becomes available.

Definition of Physiological & Morphological Terms

<i>Adaptive Growth</i> -	The process whereby wood formation is influenced both in quantity and in quality by the action of gravitational force and mechanical stresses on the cambial zone.
<i>Cankers</i> -	A localised area of dead bark and cambium on a stem or branch which can be caused by bacterial or fungal agents.
<i>Cavity</i> -	An open area within the stem or branches of the tree. The cavity forms by the presence of fungal decay.
<i>Chlorotic Leaf</i> -	Lacking in chlorophyll, typically yellow in colour.
<i>Compartmentalisation</i> -	The physiological process that creates the chemical and mechanical boundaries that act to limit the spread of disease and decay organisms.
<i>Coppicing</i> -	Is an ancient form of woodland management that involves repetitive felling and re-growth on the same stool, near to ground level.
<i>Compression</i> -	A decrease in the length of wood under a load – it's being squashed. When a tree is exposed to a wind load, the stem is bent, and the wood on the leeward (sheltered) side of the stem is subject to compression.
<i>Crack</i> -	A split in the stem or branch, involving bark and/or underlying wood. These may be vertically and horizontally orientated.
<i>Decay</i> -	Process of degradation of woody tissues by fungi and bacteria through decomposition of cellulose and lignin.
<i>Deadwood</i> -	Deadwood is often present within the crown or on the stems of trees. In some instances, it may be an indication of ill health, however, it may also indicate natural growth processes.
<i>Design Wind Load</i> -	The maximum static load to which a tree is expected to be exposed during a chosen extreme wind event. It is the interaction between the wind force and the size and shape of the crown of the tree. Design Wind Load is expressed as a moment.
<i>Girdling Root</i> -	Root which circles and constricts the stem or roots causing death of phloem and/or cambial tissue.
<i>Ganoderma</i> -	A type of fungus found on the stem, base and roots of some trees that has the potential to cause decay
<i>Hazard Beam</i> -	An upwardly curved branch in which strong internal stresses may occur without the compensatory formation of extra wood (longitudinal splitting may occur in some cases).

- Included Union** - Pattern of development at branch junctions where bark is turned inward rather than pushed out. Potential weakness due to a lack of a woody union.
- Inonotus** A type of fungus found on the branches, stems, buttress and roots of some trees and has the potential to cause decay.
- Ivy Growth** - Ivy growth may ascend into the tree's crown, increasing wind resistance, concealing potential defects and reducing the tree's photosynthetic capacity. Ivy growth is often acceptable in woodland areas as a conservation benefit.
- Kretzschmaria deusta**- A fungus found on the base and roots of some trees that has the potential to cause decay.
- Live Crown Ratio** - The relative proportion of photosynthetic mass (leaf area) to overall tree height.
- Reaction Wood** - Specialised secondary xylem, which develops in response to a lean or similar mechanical stress, attempting to restore the stem to the vertical.
- Root Plate Lift** - The physical movement of the rooting plate causing soils to shift and crack. May occur during adverse weather conditions. Trees may become unstable.
- Suppressed** - Trees which are dominated by surrounding vegetation and whose crown development is restricted from above.
- Topping** - A highly disfiguring practise, likely to cause severe xylem dysfunction and decay in major structural parts of the wood.
- Wound** - Any injury, which induces a compartmentalisation response.
- Wound wood** - Wood with atypical anatomical features, formed in the vicinity of a wound and a term to describe the occluding tissues around a wound as opposed to the ambiguous term "callus."
- Woodland Structure** - The vertical and horizontal arrangement of trees within a group or woodland i.e. Dominant - trees with a crown above the upper layer of the canopy, Co-dominant - trees that define the general upper edge of the canopy, Intermediate - trees that have been largely overgrown by others, Suppressed - trees that have been overgrown and occupy an under storey position and grow slowly, often severely asymmetrical.
- Note: The definitions described above, may not necessarily be included within the Arboricultural Survey Data.*

3.0 RECOMMENDATIONS

3.1 It is recommended that all works to the trees be carried out in accordance with the data tables of Appendix One in order to bring them into good management and continue long-term tree cover in this area. The works can be summarised as follows:

Priority	Other	Prune	Fell
1	-	-	-
2	-	-	-
3	-	T1	-
4	-	-	-

Priority Rating:

- 1 - Immediate- Action should be taken immediately
- 2 - High – Works should be undertaken within 4 weeks
- 3 - Moderate - Work should be implemented in a programme of works (within 6 months, unless otherwise stated)
- 4 - Low - Work that would benefit the trees or other issues. Work not considered essential, but should be implemented if funding becomes available

3.2 Standard of work

All tree work undertaken should be done in accordance with British Standard 3998:2010 and by competent contractors who are insured with public liability cover of at least two million pounds.

3.3 Statutory controls

If the trees on site are subject to any Tree Preservation Orders (TPO's) or are encompassed within a Conservation Area, then statutory permission from the Local Planning Authority (LPA) will be required before any tree works take place.

3.4 Wildlife

All operations should take account of wildlife needs and be planned to take advantage of weather conditions and time of year for minimum damage and disturbance. If any protected species or nesting birds are present or discovered while the works are taking place all work should cease until contact has been made with Natural England for further advice. Natural England can be contacted on 0845 600 3078 or by e-mail to: enquiries@naturalengland.org.uk. Specific consideration should be given to the possible presence of roosting bats, which are protected by the Wildlife and Countryside Act 1981 (schedule 5) and included in schedule 2 of the Conservation Regulations 1994. Ideally, a survey should be carried out to identify any potential roost sites and if bats are found to be present advice should be sought from a person qualified and experienced in handling such matters and fully conversant with the implications of the Act.

3.5 Repeat survey's

The frequency of the repeat surveys should be carried out on a biennial basis.

4.0 Discussion

- 4.0.1 On the day of the inspection the tree was found to be free of any risk features such as cavities, splits in the branches or fungal fruiting bodies. The trees vigour was high. The overall structure of the tree is deemed to be excellent with a broadly symmetrical dome. The visibility from public viewpoints is deemed to be moderate but the tree contributes a good level of amenity value to the surrounding area. Its loss would negatively impact the look of the area.
- 4.0.2 Low branches over the third party road should be pruned to a height of 5m from ground level to allow high sided vehicles access. The significant pieces of deadwood over the road should be removed as car parking may occur under the crown of the tree and the dead branches could be dislodged during high winds.
- 4.0.3 A CAVAT valuation has been undertaken on the is tree which values the tree at £60,711.00 (See Appendix 4)
- 4.0.4 It is proposed by a third party to reduce the branches overhanging the third party road back to the boundary line. The current two – dimensional area of the crown is estimated to be 242m². By reducing the overhanging branches back to the boundary line, which is an estimated 4m linear reduction, the overall crown two-dimensional surface area will be reduced to 176m². This is a reduction of approximately 27% of the crown. (See Appendix 3)
- 4.0.5 These figures were incorporated into a new CAVAT assessment of the tree with the estimated crown loss which reduced the trees value to £42, 927.00. This is a **net loss of £17,784**. This figure is clearly an unacceptable loss of value for limited gains on the third party side. (See Appendix 4)
- 4.0.6 The proposed pruning works would also not be compliant with BS 3998:2010 for the following reasons:
- Pruned branches should be reduced to a healthy side branch that is no smaller than 1/3 of the parent branch but should be ideally 1/2 the size of the parent branch.
The branches at the fence line are of varying sizes but due to their proximity to the stem there is very little side branching at this point and there is certainly not the ability to prune back to a branch 1/3 the size of the parent branch. This will result in either branch death or will result in prolific shoot growth making that part of the crown very dense and blocking a great deal more light than the tree currently does. These branches will likely be weakly attached to the parent stem and will run the risk of future failures due to poor attachment and decay from the large pruning would be inflicted.
 - Each cut should be as small as possible.
The proposed pruning is clearly not in the spirit of this recommendation
 - Pruning Stubs should not be left.
Pruning to a fixed point such as a fence line does not work in harmony with the trees structure and therefore stubs will inevitably be left with the proposed pruning works.

4.1 ADDITIONAL NOTES REGARDING COMPLAINTS FROM ADJACENT PROPERTIES.

4.1.1 *What dangers the trees pose to safety – school and neighbours?*

The issue of risk is dealt with in this report. The report has been based on VALID method for balancing tree benefits against risk. More details can be found in Appendix 3.

4.1.2 *The impact on light – neighbours.*

The tree has been present on this site prior to the construction of the buildings and therefore residents will have been aware of the trees presence when buying the properties.

The Rights of Light Act 1959 states that if a property has received daylight for the last 20 years (the minimum prescribed period), they may be entitled to continue to receive that light. In theory a case can be made for large trees blocking light, but trees are rarely implicated because they grow slowly, and it is difficult to be precise about when the loss of light occurred. The neighbouring houses are not older than 20 years and therefore have not had light for more than 20 years.

Trees restricting light that fall within the terms of the High Hedges Act might be contested on these grounds rather than the Right to Light Act, however, the criteria is not met for this tree.

In all other cases there is no inherent 'right to light' in relation to trees or hedges

4.1.3 *Encroachment including roots & branches*

Your neighbours have the right to trim and prune branches and roots back to the boundary of their land as long as they do not kill or make your trees unsafe.

With regards to subsidence & structural damage, it is not possible to make an accurate assessment as no information has been provided on the soil type and the depths of the foundations for these buildings.

Lally Tree Management have not been made aware of any structural issues with the adjacent properties.

It appears that the Oak was present when these properties were built and therefore the foundation designs should have taken this tree into account.

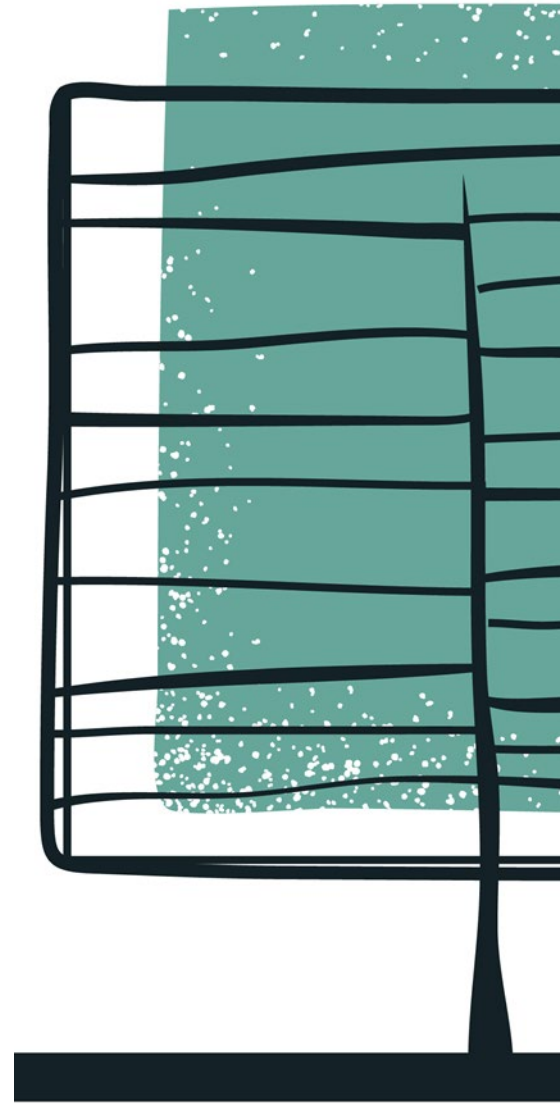
The owner of the tree is still the owner of the branch when it has been severed from the tree and the third party should offer the branches back to the owner. If this is not done, then this could be deemed as theft. The owner of the branches is not required to remove the branches and or dispose of the branches. If a third party chooses to remove the branches this is to be at their cost, if the owner chooses not to take the branches back the branches must be disposed of by the third party at the cost of the third party.

4.1.4 Lally Tree management has been informed by the owner of the tree that this tree is protected by a tree preservation order and therefore, statutory permission from the Local Planning Authority (LPA) will be required before any tree works take place.

5.0 Recommendations

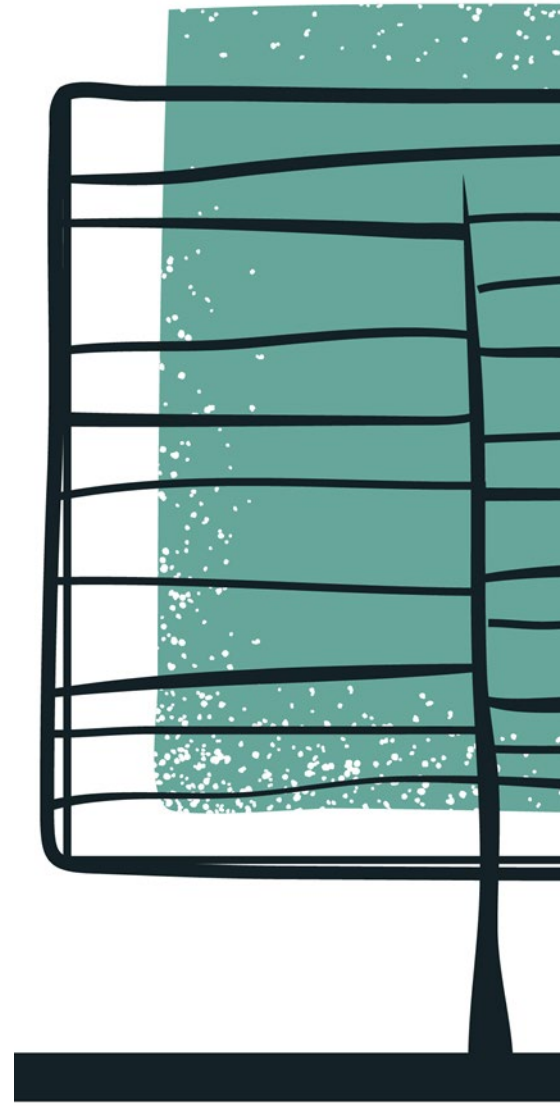
5.1.1 This tree should be crown lifted to 5m over the third party road and significant deadwood removed within 6months.

Appendix One. Tree Survey Data

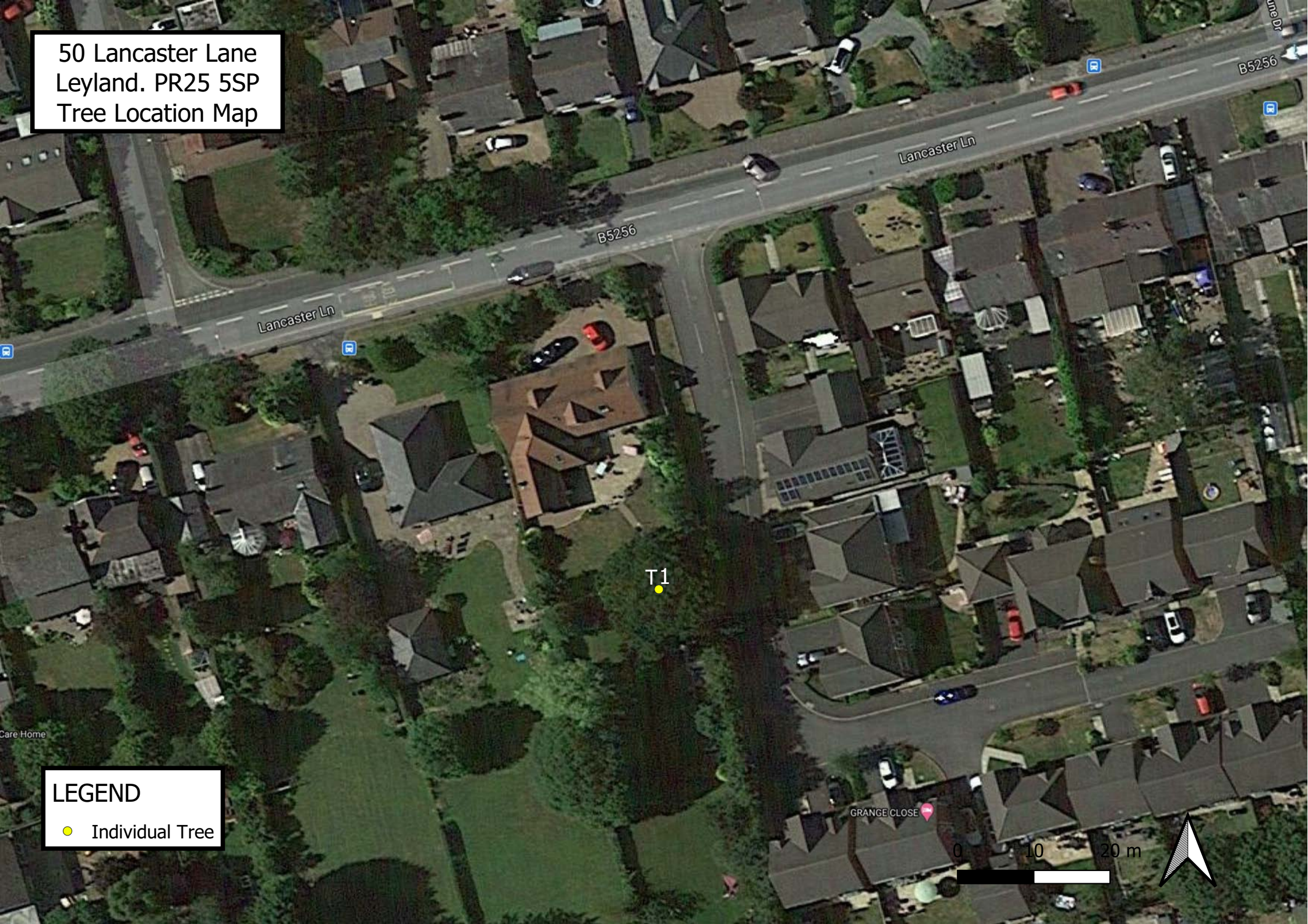


T1		
Species	English Oak <i>'Quercus robur'</i>	Comments A Co-dominant specimen located at rear of property adjacent to third party private road estate. Moderate visibility from public viewpoints. Tree has excellent form and vigour. No significant cavities observed. No splits, cracks, decay or fungal fruiting bodies observed. Small dead branches present in crown but is normal for species. 90% of the expected crown is present and is functioning normally.
Hight (m)	18	
Stem Diameter (cm)	98	
Estimated Diameter of Crown (m)	17	
Approx. Age	M	Recommendations
Condition Rating	A	Crown lift to 5m over road. Remove significant deadwood from over road.
CAVAT Value	£60,711.00	
Survey Type	Basic	
Risk	Acceptable	
Priority of Works	3	
Next Inspection (Months)	24	

Appendix Two. Site Plans



50 Lancaster Lane
Leyland. PR25 5SP
Tree Location Map

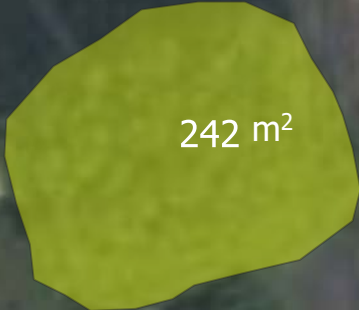


LEGEND
● Individual Tree

0 10 20 m

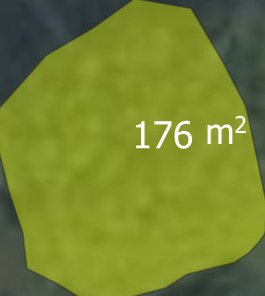


50 Lancaster Lane
Leyland. PR25 5SP
Tree Canopy area m2



242 m²

50 Lancaster Lane
Leyland. PR25 5SP
Pruned Tree Canopy Area m2

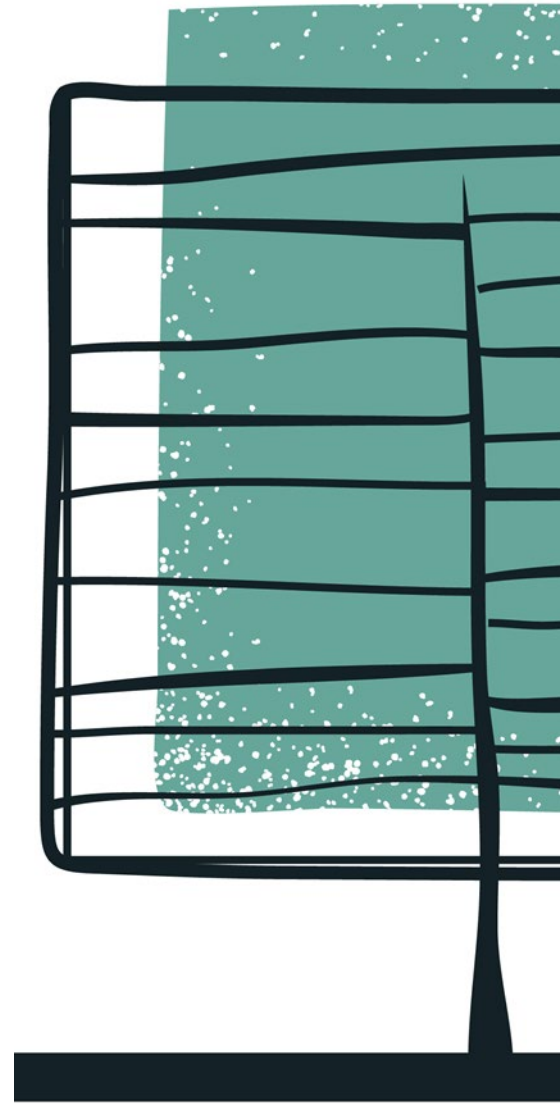


176 m²

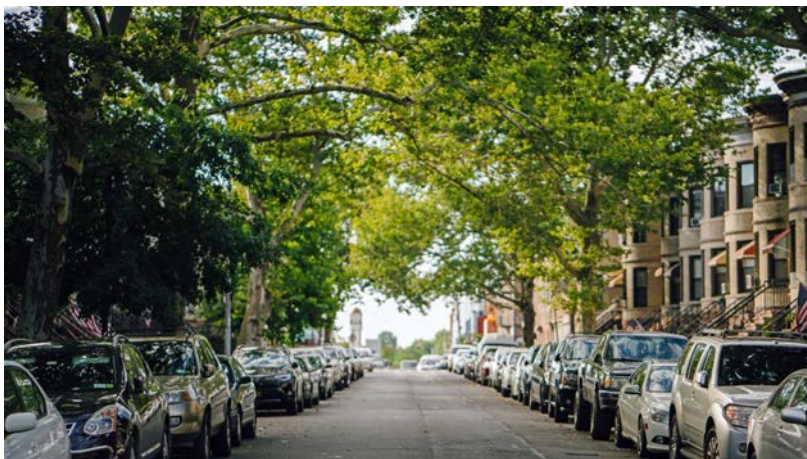
Appendix Three.

VALID Management

Strategy



Tree Risk-Benefit Validator



	Page
Policy	1
Active Assessment	2
Obvious Tree Risk Features	3
What is VALID?	4

Establishing the context

Trees give us many benefits that we need

1 The more obvious benefits that trees give us are visual beauty in the landscape, wood, and the various crops they produce. Further values include wildlife habitat, pollution filtering, and reducing the harmful effects of both weather and climate change. Trees also have important social value as part of our culture, history, or because they commemorate an important event. As if those benefits weren't enough, an increasing body of scientific evidence demonstrates that trees are fundamental to our physical health, mental wellbeing, and quality of life.

The overall risk to us from branches or trees falling is extremely low

2 Compared to other everyday risks we readily accept, the overall risk to us from branches or trees falling is extremely low. Our annual risk of being killed or seriously injured is less than one in a million. That's so low, we're at greater risk from a 200 miles (320km) round trip drive to visit friends for a weekend than from branches or trees falling for a whole year. Given the number of trees we live with, and how many of us pass them daily, being killed or injured by a tree is a rare event; one that usually happens during severe weather.

We can't be an insurer of nature or eliminate the risk from trees

3 Of course, we can't be an insurer of nature, and trees are living structures that sometimes shed branches or fall over. But this usually happens because of severe weather. Or because they have an obvious risk feature. Since we need the many benefits from trees, we have to accept we can't remove all of the risk. Trees can also drop cones, nuts, and fruits, though these risks are so low they're Acceptable: any exceptions are covered in the Plan.

Reasonable
Proportionate
Reasonably practicable

1.1 Duty of care

4 We have a duty of care to manage the risk from our trees. That duty also says we should be reasonable, proportionate, and reasonably practicable when managing risk. What that means is, there's a balance we need to strike between the many benefits trees provide, the risk, and the costs of managing the risk. By taking a balanced approach, we don't waste resources by reducing risk - and losing benefits - when the risk is already Acceptable or Tolerable.

We all have a responsibility to make reasonable decisions

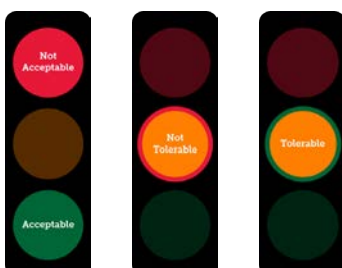
5 We're all expected to act reasonably and responsibly. When severe weather is forecast, we can manage our exposure to the higher risk from tree failure by not going out. If we go out, we're choosing to accept some of the risk.

What's an Acceptable or Tolerable level of risk from our trees?

1.2 Risk tolerance

6 The Tolerability of Risk Framework (ToR) is an internationally recognised approach to making risk management decisions. It's used by duty holders where they manage a risk that's imposed on the public. ToR defines *Broadly Acceptable* and *Unacceptable* levels of risk. Between them is a region where the risk is *Tolerable* if it's 'as low as reasonably practicable' (ALARP). Put simply, ALARP means the risk is Tolerable if the costs of the risk reduction are much greater than the value of the risk reduction.

Risk ratings are as easy to understand as traffic lights



1.3 Risk ratings

7 VALID has applied ISO 31000 - Risk Management Standards and ToR to tree risk-benefit assessment and management, which we've adopted. We're going to manage the risk from our trees to four easily understandable traffic light coloured risk ratings.

Red Not Acceptable risks will be reduced to an Acceptable level

Amber Not Tolerable risks will be reduced to an Acceptable level, but with a lower priority than red Not Acceptable risks

Tolerable risks will not be reduced but may require an increased frequency of assessment than green Acceptable risks

Green Acceptable risks will not be reduced

2 What's Active Assessment?

A structured approach with three levels of assessment

8 Active Assessment is taking a structured approach where we're looking to find risks that might not be Acceptable or Tolerable. It has three levels to that increase in depth of evaluation from, Basic, to Detailed, up to Advanced.

Risk ratings are limited by the level of assessment

9 Risk ratings have limitations that are dependent on the level of assessment at which they're made. For instance, at a Basic Assessment level, if there are no obvious tree risk features then the risk is Acceptable. A Detailed or Advanced Assessment is an increase in depth of evaluation that might find risk features which weren't obvious at a Basic level, and could mean a higher risk. However, carrying out these higher levels of assessment without an obvious risk feature to trigger them is not reasonable, proportionate, or reasonably practicable.

2.1 Basic Assessment

Finding the few trees where the risk might not be Acceptable or Tolerable

10 A Basic Assessment is our starting point. At this level, we aim to find trees with obvious features where the risk might not be Acceptable or Tolerable. We'll carry out a Detailed Assessment on these trees.

We'll assess the trees from easily accessible ground

11 We'll assess the trees from easily accessible ground, by foot, bike, or in a vehicle with a drive-by.

If we can't get a close enough look at a tree we'll let you know

12 If there are any trees with obvious risk features that we need to get a closer look at, but can't because of climbing plants, undergrowth, basal growth, hedgerows, or the ground. These trees will be noted and we'll let you know about them. Similarly, if there's a boundary tree and we need permission from a neighbour to take a look at from the other side.

The trees or what they could fall on and the type of assessment will be recorded

13 Trees or what they could fall on and the type of assessment are recorded. For example, in a park, individual or groups of trees are plotted and recorded as having been assessed on foot. Whereas, if there are many trees beside a road, the road will be recorded as having been assessed on foot or with a drive-by.

No obvious risk features the risk is Acceptable

14 Unless individual trees have been picked out for a Detailed Assessment, the risk will be recorded as Acceptable at this Basic Assessment level.

2.2 Detailed Assessment

We do a Detailed Assessment when a tree needs a closer look

15 A Detailed Assessment is carried out on trees picked out during a Basic Assessment as needing a closer look because they have an obvious risk feature. Or, because we've been asked to take a closer look at a particular tree.

The risk is assessed with the App

16 The assessment is done from ground level using the Tree Risk VALID App.

We'll produce a report

17 The report will include the risk rating, risk review year, risk reduction work options (if necessary), and any general management advice.

2.3 Advanced Assessment

Large and important trees might be worthy of more effort and cost

18 If we need more information about the likelihood of failure, an Advanced Assessment can be carried out. This might be an aerial inspection, or because we suspect extensive decay with significant strength-loss, and want to find out whether the tree has a high enough 'safety factor' - is it strong enough?

What we'll advise depends on the tree and your budget

19 If we think a tree needs an Advanced Assessment we'll let you know and go through the options with you. If the costs are substantial, we can help you to decide whether the tree has enough value and future benefits to justify the expense. When we carry out an Advanced Assessment, we'll produce a report explaining what we did and the results. The report will also include the risk rating, risk review year, risk reduction work options (if necessary), and any general management advice.

When might a tree be dangerous?

Trees with the highest risk are the easiest to spot

When a tree has a risk that might not be Acceptable or Tolerable, it'll often have an obvious tree risk feature that you can't help but notice. If you come across one of your trees with any of these obvious features in a well-used area, then you need to get in touch with us for advice.

Root failure

Be watchful after storms

Storms can break tree roots without blowing them over

**Tell-tale signs are
Change in angle of the trunk
Large cracks in the soil
Hump in the ground on one side**



Hanging branches

Don't forget to look up

Branches can break during storms and still hang on

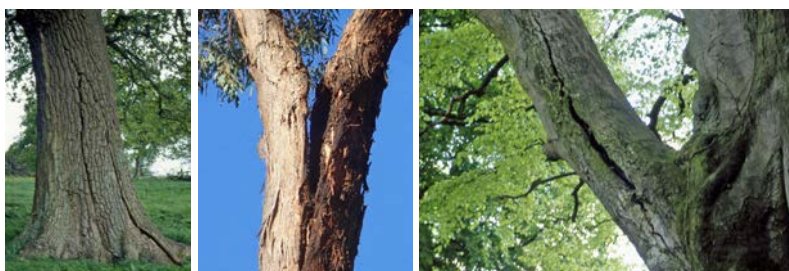
Sometimes they can get stuck up there for quite a while



A crack or split into the wood, beyond the bark

When trees bend and twist in storms the wood can split and crack

Vertical cracks in the bark are just the tree growing well there's no need to worry



Advanced decline or death

To be healthy and stay strong trees need 'solar panel' leaves to make food and new rings of wood

When trees are suffering there's often much less leaf cover and many more dead branches

Standing dead trees have great habitat benefits but need checking



Decay fungi fruiting bodies

To decay fungi these 'fruits' are like apples to an apple tree

Decay fungi and trees mostly live happily together creating essential habitat for wildlife

Fungi can sometimes 'eat' too much wood and weaken the tree



Photographs

Jake Miesbauer, Michael Richardson, Roy Finch, Mark Hartley, Rick Milson, David Abrahams
Felicity Cloake & Wilf, David Humphries, Jack Prynne.

VALID in a nutshell



VALID is the first complete tree risk-benefit management system. It comes with a super smart **Tree Risk App**, which we train 'Validators' to use and carry out tree risk-benefit assessments.

To partner the App, we've got a range of free, common sense **Tree Risk-Benefit Management Strategies** to help meet the needs of any duty holder.

We're a not-for-profit organisation dedicated to providing training and giving guidance about the risk from tree failure.

VALID has been stress-tested
to breaking point



Tree risk-benefit assessment

When they carry out a Detailed Assessment, trained Validators use our **Tree Risk App** to enter the Likelihood of Occupancy, Consequences, and Likelihood of Failure categories. The App then works out the level of risk.

The engine of the App has been built with a Professor of Natural Hazards & Risk Science. The Professor's an internationally distinguished expert in this field. He's test-driven the model to breaking point;

"We have stress-tested VALID and didn't find any gross, critical sensitivities. In short, the mathematical basis of your approach is sufficiently robust and dependable for any practical purpose."

Willy Aspinall
Cabot Professor in Natural Hazards & Risk Science
University of Bristol

Reasonable
Proportionate
Reasonably practicable

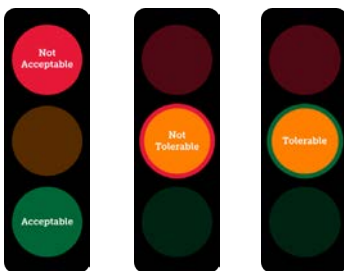


Tree risk-benefit management strategies

Whether you're a Government Agency, Landowner, or Homeowner if you own trees you have a duty of care to manage the risk from them. That duty of care says, be reasonable, proportionate, and reasonably practicable when managing the risk. What this means is, there's a balance that needs to be struck between the many benefits trees provide, the overall risk from them, and the costs of managing the risk.

VALID has a range of easy to understand, common sense **Tree Risk-Benefit Management Strategies**. These are forged on ISO 31000 Risk Management Standards and the Tolerability of Risk Framework (ToR). As part of our not-for-profit mission, they're free and released under a creative commons license. They explain how you can go about meeting your duty of care whilst being reasonable, proportionate, and reasonably practicable. Validators can customise the strategies for duty holders to formally adopt. They also have a potted version that can be used to help clients who have yet to formally adopt a strategy.

Risk ratings are as easy to
understand as traffic lights



Tree risk ratings

Yes, it really is that simple. There's no confusion about what vague words or complicated numbers mean. We have four easy to understand traffic light coloured risk ratings based on ToR, which is an internationally recognised approach to making risk management decisions.

Red **Not Acceptable** risks need to be reduced to an Acceptable level

Amber **Not Tolerable** risks need to be reduced to an Acceptable level, but have a lower priority than red Not Acceptable risks

Tolerable risks do not need to be reduced, but may require an increased frequency of assessment than green Acceptable risks

Green **Acceptable** risks do not need to be reduced

Appendix Four. CAVAT Data Sheet



CAVAT

SPREADSHEET TO CALCULATE VALUE OF INDIVIDUAL TREE STOCK (FULL METHOD)

T1 - Oak - Before Pruning Value

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Created by Alexandra Sleet and Phillip Handley

Only enter data in the pale-green boxes

CAVAT	Quantities you measure / look up	Calculated Values
<u>Step 1: Basic Value</u>		
Measured Trunk Diameter	<input style="background-color: #e0ffe0;" type="text" value="98.00"/>	
Unit Value Factor	<input style="background-color: #e0ffe0;" type="text" value="16.26"/>	
Basic Value		<input style="border: 1px solid black;" type="text" value="£122,648.59"/>
<u>Step 2: CTI Value</u>		
Community Tree Index (CTI) Factor	<input style="background-color: #e0ffe0;" type="text" value="100"/>	
Community Tree Index (CTI) Value		<input style="border: 1px solid black;" type="text" value="£122,648.59"/>
<u>Step 3: Location Value</u>		
Location Factor	<input style="background-color: #e0ffe0;" type="text" value="50"/>	
Location Value		<input style="border: 1px solid black;" type="text" value="£61,324.30"/>
<u>Step 4: Functional Crown Value part 1</u>		
Structural Factor	<input style="background-color: #e0ffe0;" type="text" value="90"/>	
Structural Value		<input style="border: 1px solid black;" type="text" value="£55,191.87"/>
<u>Step 5: Functional Crown Value part 2</u>		
Functional Crown Factor	<input style="background-color: #e0ffe0;" type="text" value="100"/>	
Functional Crown Value		<input style="border: 1px solid black;" type="text" value="£55,191.87"/>
<u>Step 6: Amenity Value</u>		
Positive Attributes Factor	<input style="background-color: #e0ffe0;" type="text" value="10"/>	
Negative Attributes Factor	<input style="background-color: #e0ffe0;" type="text" value="0"/>	
Amenity Value	<input style="border: 1px solid black;" type="text" value="110"/>	<input style="border: 1px solid black;" type="text" value="£60,711.05"/>
<u>Step 7: Full Value</u>		
Life Expectancy Factor	<input style="background-color: #e0ffe0;" type="text" value=">80"/>	
FINAL VALUE		<input style="background-color: yellow; border: 1px solid black;" type="text" value="£60,711"/>

CAVAT

SPREADSHEET TO CALCULATE VALUE OF INDIVIDUAL TREE STOCK (FULL METHOD)

T1 - Oak - After Pruning Value

© Christopher Neilan

Created by Alexandra Sleet and Phillip Handley

Only enter data in the pale-green boxes

CAVAT	Quantities you measure / look up	Calculated Values
<u>Step 1: Basic Value</u>		
Measured Trunk Diameter	<input style="background-color: #e0ffe0;" type="text" value="98.00"/>	
Unit Value Factor	<input style="background-color: #e0ffe0;" type="text" value="16.26"/>	
Basic Value		<input style="border: 1px solid black;" type="text" value="£122,648.59"/>
<u>Step 2: CTI Value</u>		
Community Tree Index (CTI) Factor	<input style="background-color: #e0ffe0;" type="text" value="100"/>	
Community Tree Index (CTI) Value		<input style="border: 1px solid black;" type="text" value="£122,648.59"/>
<u>Step 3: Location Value</u>		
Location Factor	<input style="background-color: #e0ffe0;" type="text" value="50"/>	
Location Value		<input style="border: 1px solid black;" type="text" value="£61,324.30"/>
<u>Step 4: Functional Crown Value part 1</u>		
Structural Factor	<input style="background-color: #e0ffe0;" type="text" value="70"/>	
Structural Value		<input style="border: 1px solid black;" type="text" value="£42,927.01"/>
<u>Step 5: Functional Crown Value part 2</u>		
Functional Crown Factor	<input style="background-color: #e0ffe0;" type="text" value="100"/>	
Functional Crown Value		<input style="border: 1px solid black;" type="text" value="£42,927.01"/>
<u>Step 6: Amenity Value</u>		
Positive Attributes Factor	<input style="background-color: #e0ffe0;" type="text" value="0"/>	
Negative Attributes Factor	<input style="background-color: #e0ffe0;" type="text" value="0"/>	
Amenity Value	<input style="border: 1px solid black;" type="text" value="100"/>	<input style="border: 1px solid black;" type="text" value="£42,927.01"/>
<u>Step 7: Full Value</u>		
Life Expectancy Factor	<input style="background-color: #e0ffe0;" type="text" value=">80"/>	
FINAL VALUE		<input style="background-color: yellow; border: 1px solid black;" type="text" value="£42,927"/>