



Cheshire Tree Surveys and Arboriculture

Balancing Risk with Ecology

A report on trees at 67 Longmeadow Road, Knowsley Village

Prepared for Mr A Campbell

by

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SUMMARY

An authority or any person responsible for the safety of trees is under a duty to have them inspected by a competent person at reasonably frequent intervals so that any indication of disease, possible disease, structural defect, or any other problem present at the time of inspection can be noted and acted upon. The purpose of this report is to undertake an inspection of all the significant trees on land at 67 Longmeadow Road, Knowsley Village, L34 0HW in respect of this duty of care. It records its species, age, condition, and pertinent comments, recommended action, and priorities of said actions. The trees were given a brief inspection from ground level and any obvious significant externally discernible defects were noted.

1) INTRODUCTION

1.1 Brief: I was commissioned by Mr A Campbell of 67 Longmeadow Road to carry out a tree survey, to establish what tree species inhabited the grounds. All my inspections were carried out from the ground using the visual tree assessment method. On the day of my visit, it was sunny, conditions under foot were good and visibility was high. I carried out my inspection on 20th April 2021.

1.2 Qualifications and experience: I have based this report on my site observations and the provided information, and I have come to conclusions in the light of my experience. I have experience and qualification in Arboriculture listed in Appendix 1.

1.3 Documents and information provided: I was given no Topographical Map or images

1.4 Scope of this report: I noted that there are no trees to the rear of the property belonging to 67 Longmeadow Road. There are however some small semi mature trees to the left-hand side of the garden fence belonging to 65 Longmeadow Road and some semi mature shrubs to the right belonging to 69 Longmeadow Road. At the rear of the fence there is a Willow (*Salix* spp) tree at 47 Ormskirk Road. This is the tree that most of this report scope is based on.

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2 FINDINGS

This specimen of Willow (*Salix* spp) has been historically pruned incorrectly on the owners' side of the fence. And after consultation with my client, he informed me that the tree owner, had previously gave him permission, to have the tree pruned which was encroaching his boundaries, and to be pollarded back to boundary as per his legal right (see images) by a fully qualified and insured tree surgeon. The tree has a significant lean towards my clients and no. 65 Longmeadow Road boundary fences. There is a high risk of airborne fungal infection (a list of which will be provided below) and also, damage to the root plate system due to my client undertaking building works, but this will not be wilful destruction as any works will be carried out during the excavation with good current arboricultural practices in mind.

However, my client does have a legal right to prune any root system that encroaches his property boundary. This would further enhance the stability problems of the tree.

There is also a very poor specimen of Leyland Cypress (*Cupressocyparis Leylandii*) below the Willow Tree which has significant evidence of rubbing upon it. I would recommend removal of this.

Images to illustrate:

Willow Tree along with Leylandii possibly supporting Willow showing pollard points and heavy lean



Significant lean of Willow Tree



Times Two Thuja Plicata in no. 65 Longmeadow Rd garden



Overall view of Willow emerging from Leylandii



3 RECOMMENDATIONS

I would recommend due the significant factors listed below that the tree is sectionally dismantled and removed and the stump ground out and a tree of a much more appropriate species be planted in its place, i.e. prunus species (flowering cherry).

a) reactive/epicormic growth – the Salix species reacts voraciously with reactive growth, obviously trying to recapture canopy area lost by pruning. However, as Dr David Lonsdale tells us in his book “Principles of Tree Hazard Assessment and Management” - If a pollarded or coppiced tree is not cut again for many years, new bark inclusions may develop between adjacent branches, especially if they are crowded. There is then a renewed and increasing tendency for the branches to tear away, as they become heavier and spread more widely. Such failure can occur in practically any species, but it is most prevalent in those which tend to form numerous competing branches, or which appear to have weaker wood than most others. Thus, it appears that a very high proportion

of pollard failures among amenity trees are accounted for by various types of poplar (*Populus* spp) and perhaps also **Willow (*Salix* spp)**.

To further prevent the risk of failure from the epicormic growth not becoming a hazard this would require an ad hoc maintenance program at the expense of the tree owner to ensure by selectively thinning the branches to ensure good bark inclusions.

- b) Root damage – my client will be undertaking excavation work as part of his building program which will cause damage to the root system of the tree which is encroaching into his boundary. As said before he will be using good arboricultural practise, however removing the root system on the leaning side of the tree would possibly cause failure. Also, due to the fact that the tree has been pollarded and it will then be having its root system pruned this will cause high levels of stress to the tree. Possibly leading to an infestation of root colonising fungi.

- c) Attacking fungi – found in high frequency on Willow (*Salix* spp)

Fungi Name: *Bjerkandera adusta*



Common name: Smoky polypore.

Often found on Deciduous broadleaved species.

Sometimes found on conifers.

Location - Found along the main stem and larger branching structure of the standing tree – persists on stumps and fallen tree parts.

Description - Annual . Somewhat tough. Usually abundant. Begins as a grey pore surface with a whitish rim before developing into brackets that are zoned with browns and greys on the upper surface. Can remain resupinate on undersides of the substrate. White spore. Individually thin.

Confused with *Bjerkandera fumosa* (slotted pores, much thicker, less frequent); *Trametes versicolor* (white pore surface).

Significance - Attributed to a selective white rot of the wood. Considered saprotrophic – potentially weakly parasitic. Generally enters during earlier stages of wood dysfunction and decay. Presence on the stems and limbs / branches of standing trees signals vascular dysfunction and decay. Often associated with (local) decline on standing trees. When found on stems, further investigations may be necessary.

Fungi Name: *Daedaleopsis confragosa*



Common name: Blushing bracket.

Often found on Alder, birch, cherry, willow.

Sometimes found on Oak, sweet chestnut, and other broadleaved species.

Location - Found on the main scaffold structure of the tree – persists on dead tree parts both standing and fallen.

Description

Perennial. Tough and woody. Occurs singularly / in groups. Can become fair-sized. Begins as a white mass before developing into a bracket – sometimes uneven. Upper surface a beige-brown, concentrically-zoned and bruises a deep red – sometimes significantly. Rimmed white. Pore surface white and elongated / maze-like. Flesh beige. Deep tube layer. Blushes to the touch. Fruit bodies become a dark grey-brown to a tinged charcoal black when senescent.

Confused with Daedalea quercina (only on oak – doesn't blush); Fomitopsis betulina (Annual and rubbery – doesn't blush); Trametes gibbosa (greenish upper surface – doesn't blush).

Significance - Attributed to a selective white rot of the wood. No research has been undertaken on the pathogenicity of this fungus. Often localised to deadwood and pruning wounds on living trees. Stem colonisation on living trees indicates local dysfunction of the cambium.

Fungi Name: *Laetiporus sulphureus*



Common name: Chicken of the woods, sulphur polypore.

Often found on Cherry, oak, sweet chestnut, willow, yew (likely a sub-species).

Sometimes found on Beech, tree of heaven, and other broad-leaved species.

Location - Found on the stem of the tree through into the scaffold crown structure – be certain to look for fragments of this fungus at the base of the tree, during autumn and winter.

Description - Annual. Soft and fleshy. Exudes water when fresh and moist. Can become quite large. Emerges as a vanilla-white mass before developing into a frond-like structure (usually abundant splaying fronds but sometimes singular – may be observed as shelves). As fronds / shelves develop, they become a yellow-orange, with orange colourations becoming more pronounced as the bracket matures. Pore surface light yellow. Flesh yellow. Can bleach a chalky-white in senescence and then often crumbles. Fragments may also remain attached to the tree. Thick whitish mycelial sheets persist within the wood, between growth rings and rays.

Confused with Cerioporus squamosus (large pores); Pleurotus ostreatus (gilled).

Significance - Attributed to a cubical brown rot of the central wood (heartwood). No research has been undertaken on the pathogenicity of this fungus. Presence indicative of localised decay or wider decay. Wood density and strength may be quickly reduced though visible decay tends to develop slowly. Can cause hollowing and stem failure by way of brittle fracture. Investigations in to hollowing may be required, where targets exist. Prevalence potentially underestimated due to a general lack of (ephemeral) fructification.

Fungi Name: *Stereum hirsutum*



Common name: Hairy curtain crust.

Often found on a wide variety of broadleaved tree species.

Sometimes found on a wide variety of coniferous tree species.

Location - Found across the entire structure of the tree including on fallen trees and tree parts.

Description: Annual . Tough but flexible. Individually small but occurring usually in very busy clusters of overlapping tiers of brackets. Upper surface often hairy and concentrically zoned with yellows, oranges, reds, and browns. Pore surface smooth and yellow-brown. Varied appearance and morphology.

Confused with Stereum subtomentosum (bruises yellow on pore surface), Trametes versicolor (visible white pores).

Significance - Considered saprotrophic. Attributes to a white rot of the wood substrate. Indicative of dysfunctional areas on living trees.

Fungi Name: *Trametes versicolor*



Common name: Turkey tail.

Often found on Deciduous broadleaved species.

Sometimes found on conifers.

Location - Found across the entire standing structure of the tree, and on fallen trees / tree parts and stumps.

Description: Annual. Tough. Somewhat thick, individually. Usually abundant. Often overlap and may form rosette structures. Begins as an off-white mass that develops into the pore layer beneath that does not bruise. Upper surface high varied and zoned / banded with a mix of

green, brown (most frequent), grey, red, blue, or other colour. White spore.

Confused with Bjerkandera adusta (grey pore surface).

Significance - Attributed to a selective white rot of the wood. Considered saprotrophic (a competitive saprotroph able of colonising vast areas) though may act as a facultative parasite, under certain conditions. Indicative of dysfunction. Presence on branches tends to indicate deadwood / branch decline, where not isolated to pruning stubs. Presence on stems indicative of vascular dysfunction. May signal physiological decline.

Fungi Name: *Ganoderma australe*



Common name: Southern bracket.

Often found on a very wide range of broadleaved species.

Sometimes found on conifers (notably larch and pine).

Location: Found fruiting from structural roots up to the lower crown (more rarely including scaffold limbs). Can proliferate extensively amongst lapsed pollard heads.

Description: Perennial. Grows singularly or in tiers. Tough and woody. Chocolate brown surface – sometimes algal-stained. Ribbed white sometimes (usually younger specimens). Young fruiting bodies begin as white masses. White pore surface. Deep tube layer. Chocolate brown flesh. Brown spore. Upper cuticle consistently 1mm+ in thickness. Can

become very large. May grow for many years. Rarely anamorphic or aberrant in morphology.

Confused with Ganoderma applanatum (very thin outer crust).

Significance: Parasitic and saprobic. Can breach reaction zones. Attributed to a selective white rot. Trees with poor compartmentalisation ability / lacking true heartwood are often quickly hollowed out. Prompts buttress development. Can cause structural failure via windthrow / collapse and stem fracture. Hollowness and stability investigations are very necessary, where significant targets exist. Likely that all UK examples are *Ganoderma adspersum* – likely not a synonym of *G. applanatum*.

4) CONCLUSIONS

I would suggest that the most economical path of action is to follow my recommendations mainly due the cost of maintenance of the tree and also the safety factors.

APPENDIX 1

QUALIFICATION AND EXPERIENCE

Qualifications: I am a fully qualified and insured LANTRA Professional Tree Inspector and I have 24 years' experience in the Arboricultural industry. I have worked for numerous companies including Glendale Countryside, Brophy PLC, Thames Water PLC, Nick Bailey Tree Surgeons, Monkey Business and Trafford Council

Continuous Development: I am a regular attendee of webinars and seminars of The Arboricultural Association and have regular online communication and participation with my peers on several tree consultants and tree officer's forums.

APPENDIX 3

Key References

1. Shigo. A. L (1989a) A new tree biology, Shigo and Tree Associates, Durham, New Hampshire. ISBN 0-943563-04-6
2. Mattheck, C and Belier, H (1994) The body language of trees. Research for amenity trees No. 4 HMSO, London. ISBN 0-11-753067-0
3. Stouts R.G. and Winter T.G (1994) Diagnosis of ill-health in trees, Research for amenity trees No. 2 HMSO, London ISBN 0-11-752919-2
4. Lonsdale D (1999) Principles of tree hazard assessment and management, Research for amenity trees No. 2 HMSO, London. ISBN 0-11-753355-6
5. Health & Safety Executive (revised 2006) Essentials of Health and Safety at Work. HSE Books ISBN 978-0-717-66179-4
6. British Standard BS 3998: (2010) Tree Work-Recommendations. ISBN 978-0-580-53777-6
7. National Tree Safety Group (2011) Common sense risk management of trees. The Forestry Commission, Edinburgh. ISBN 978-0-900978-55-5
8. Watson G. and Green T. (2011) Fungi on Trees. Arboricultural Association, Stonehouse, Glos. ISBN 978-0-900978-55-5
9. Ball D. J and Ball-King L. (2011) Public safety and risk assessment. Earthscan, Abingdon, Oxon. ISBN 978-1-84971-381-8
10. Health & Safety Executive (revised 2011) Five steps to risk assessment. HSE Books. ISBN 978-0-7176-6440-5

APPENDIX 4

Arboricultural Terms Glossary

Abiotic Factors

Non-living factors of the environment, including temperature & wind.

Age-class

A general classification of the tree into either - young, semi-mature/maturing, mature, over-mature, or senescent.

Amenity Value

A general classification based on the trees contribution to local amenity.

Factors

such as location and visibility from public spaces, size, maturity and species are taken into account.

Apical Bud/Shoot

The apical bud, also known as the leading shoot, is responsible for shoot extension and is dominant.

Apical Dominance

A singular, leading shoot remains dominant.

Biotic factors

Living factors. For example, animals and pathogens.

Bottle Butt

Term used to describe shape of stem base, usually associated with an internal defect – refer to ‘Reaction Wood’ below.

Branch union/junction

The point at which a branch joins a larger stem. Can be a point of weakness, especially in certain species.

Cambium

A lateral meristem (see below) in vascular plants located just beneath the bark responsible for secondary growth, e.g. production of annual growth rings.

Canker

A clearly defined area of dead and sunken or malformed bark, caused by bacteria or fungi. Can have a bearing on structural integrity of infected limb(s) depending on size and location.

Chlorosis/Chlorotic

Abnormal yellow or yellow-green coloration of usually green leaves. Essentially a reduction of chlorophyll levels often as a result disease or nutrient deficiency.

Co-dominant stems

A growth characteristic, where two or more stems of similar size grow from the same point. Can create an inherent weakness.

Coppice

The method of managing trees by cutting the stems at between 1.0 inch and 1.0 foot from the ground level on a regular cycle, the cut stumps of the trees or shrubs are allowed to regrow many new stems.

Crown spread

Gives distances between extreme limits of the crown and the stem, usually along the four compass points. Helps to show crown symmetry.

Crown Reduction

The removal of branch ends to reduce the extreme limits of a trees branch spread and height.

Crown Thin

The removal of selected branches within the crown to thin the internal branch structure.

D.B.H.

'Diameter at Breast Height', an industry standard to gauge tree stem size and development. Within arboriculture, breast height is taken to be 1.5m above ground level.

Dieback

The reduction in crown vigour and extension growth progressing to death of distal parts; often associated with decline.

Epicormic/ adventitious growth

New growth from dormant buds that can often form tenuous attachments. Although some species readily form such shoots, it can be an indication of stress.

Hanger

Term used to describe a branch that has become detached and is being supported by other branches. Can be a hazard to persons and property below.

Hazard Beam

After the loss of a distal part, a limb concentrates growth upwards creating adverse end weights that can render the limb susceptible to failure.

Included bark

Growth characteristic usually caused when two or more stems/branches growing in close proximity 'fuse' together entrapping the bark from when the parts were separate in the middle, creating a potential structural weakness.

Meristem

The undifferentiated plant tissue from which new cells are formed, such as that at the tip of a stem or root.

Meristematic Disorder

A growth disorder caused by a disruption of the meristem (see above) from any of a number of biotic factors (see above). Manifests as growths such as 'Witches Brooms' & 'Galls'.

Necrosis/Necrotic

Death of tissues usually characterised by a blackening in colour.

Occlusion/Occluded Death of tissues usually characterised by a blackening in colour.

Occlusion/Occluded

Normally used to describe the overgrowth of a wound. Also, immoveable foreign objects in contact with a tree part can become encased or 'occluded' by the tree as it grows incrementally.

Pathogen

An agent that causes disease, especially a living micro-organism such as a bacterium or fungus.

Pollard

The removal and subsequent regular re-removal of the crown of a tree above animal browsing height. Can be an effective method of controlling the size of trees in urban areas. This is ideally begun in the trees early stages and maintained throughout its life.

PSULE

Potential Safe Useful Life Expectancy. A general classification as to the trees life expectancy. 0-10; 10-20; 20-40; 40+ years.

Reaction Wood

Essentially additional wood laid down by the tree to compensate for structural defects such as a cavity.

Ring barking/Girdling

The removal of bark around the entire circumference of a stem or branch, causing the death of all distal parts.

Saprophyte

An organism which exists on dead plant material.

Scaffold branches

The main structural branches within the crown.

Veteran tree

Tree that, by recognised criteria, shows features of biological, cultural or aesthetic value that are characteristic of, but not exclusive to, individuals surviving beyond the typical age range for the species concerned.

Vigour

A general classification, as to the present and future potential growth and development of a tree. A comment regarding the health status of the tree specific to its species.