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Tree Condition Survey

Client: Milestone

Site: opposite 63 High Street Chippenham CB7 5PP

Scope: Arboricultural Tree Condition Survey



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1.0 Introduction

1.1 Instruction

S.P. Landscapes & Tree Contractors Ltd were instructed by Mr Rick Skinner of Milestone to undertake an arboricultural survey, including aerial inspection on a mature Horse Chestnut tree located opposite 63 High Street Chippenham. The tree is the last in a line from Chippenham Park gardens. This survey will assess the health and condition of the tree.

1.2 Survey

The survey carried out assessed the condition of the tree based on a visual inspection made from ground level and an aerial climbing inspection of the tree, with the use of a measuring tape, clinometer and steel probe. If further inspection of any specific part of the tree is required, including the use of decay detection equipment, the recommendation to do so will be made clear in this report. Any measurements written in the report are approximate.

1.3 Report Limitations

Trees are dynamic living organisms that are subject to constant external stresses and to biological and non-biological influences. The report observations are to be considered as correct at the time of inspection only. The structure of a tree can change at any given time and should be assessed for risk regularly. A survey may need to be carried out more frequently depending on location and the surrounding population. The assessment of the tree(s) in this report may be considered valid for a period of twelve months.

1.4 Importance & Legal Framework

Trees are an important part of our urban landscape and can be taken for granted. They have important visual amenity value allowing their aesthetic beauty to break up and soften the surrounding built environment. Trees signal a change of seasons, producing flowers, fruit and autumnal colours. Collectively they can produce large quantities of oxygen, filter pollution and shelter us from wind and direct sunlight.

In recent years there has been an average of around six tree related deaths annually, which is a chance of 1 fatality per 10 million of the population. Compared with other daily risks such as industrial or traffic accidents, this figure is broadly acceptable and tolerable. These risks do increase slightly in highly populated urban areas with a high concentration of people close to trees.

There is however, an obligation of reasonable safety owed by a site owner, or manager to both visitors and to those adjacent to the site under the Occupier's Liability Act 1957 and as revised in 1984. The owner/manager of the land may be held liable for any physical harm to

persons or property arising from an accident that was both reasonably foreseeable and reasonably preventable in that situation.

1.5 Qualification & Experience

This survey and report have been completed by Ian Clarke, who holds an ABC Level 4 Diploma in Arboriculture and based this report on site observations, continual professional development courses and knowledge gained over the last 10 years as a practicing arborist.

1.6 Survey Date & Data Collected

The tree surveyed at this site was carried out on Monday the 23rd May 2022. The weather on the day was dry, with clear skies. I carried out the aerial survey with a colleague, H. Mason, who accompanied me in the tree for the climb. The survey involved assessing the condition of the trees with special attention paid to deadwood and the old pollard heads with regards to level and depth of decay in them.

2.0 Site Description

2.1 Overview

The tree is located at the end of a line of horse chestnuts coming away from the vehicle entrance to Chippenham Park gardens. The Tree has been Pollarded in the past but this was too hard at the time with the original wound sizes being 300mm plus on some stems well beyond best practice. The Tree is alongside a footpath and road with the canopy currently being brushed when tractors with hay bales come past.

2.2 Site Restrictions

At this stage the data search undertaken identifies the tree surveyed to be within the Chippenham Conservation Area (CA) but not under a Tree Preservation Order (TPO). This information was provided to me by East Cambridgeshire District Council and any work carried out will be subject to a planning application of up to 6 weeks from validation prior to any work.

3.0 Observations & Assessment

3.1 Systematic Method of Assessment

I have visually inspected the tree from the ground and through an aerial inspection and recorded the information found. This inspection takes into account information from visual assessment and discussions with my colleague, with due consideration given to ground conditions; assessing soil erosion, soil characteristics and the impact of compaction including

historical excavation which may have been placed upon the tree during its lifetime. Visual defects such as cavities, deadwood and fungal brackets (if any) have all been noted. This method of assessment is to identify a foreseeable failure, make an informed decision and act on it within a specific timeframe.

3.2 Brief Site Observation

The assessment is only concerned with the Horse Chestnut tree and does not take into account any other trees on the site. The survey is based on information that was available at the time of inspection.

3.3 General Tree Assessments

T1 – Horse Chestnut. 15m in height and approx. 115cm DBH.

The Root plate does not show any signs of disturbance, neighbours of the tree felt it had developed a lean after the winter storms but I did not see any evidence of this when I inspected the tree.

The Main stem has a lot of epicormic regrowth with the canopy no lower than approx. 3m above ground level. The Tree was pollarded badly many years ago with the wound sizes being far too large for the tree to compartmentalise properly this has led to rot pockets in all of the Pollard heads. The depth of these rot pockets can join up in too much larger areas of dysfunction. Most of the holes are dry but 1 was wet and holding water indicating it has a solid base and the water is not draining pocket.

The crown was in full leaf and has good vitality but with weakened attachment points as to be expected with pollard heads. The regrowth is approximately 5 years old or more.

The areas of dysfunction are large and have rotted down a good distance in places as much as 60cm from the old pollard head. The amount of residual wall in some places is below the 1/3 t-r ratio that is usually accepted but with the pollard heads not being all the way round a stem at the same height it is unclear how much residual wall is left on the other side.

Also found in one of the rot pockets and on the main stem was fungal fruit bodies believed to be *Ceriporus squamosus* or *Ganoderma applanatum* with my thoughts being it is more likely to be *Ceriporus squamosus*. Which is usually found around areas of dysfunction, it is associated with selective white rot of the wood and causes cavity formation.

4.0 Management Recommendations

4.1 Present Requirements

T1 – Repollard to previous points

4.2 Implementation of Works

All tree works should be carried out to BS 3998:2010, *recommendations for tree work* as modified by more recent research. It is advisable to select a contractor from the local authority list and preferably one approved by the Arboricultural Association.

4.3 Statutory Wildlife Obligation

The Wildlife and Countryside Act 1981 as amended by the Countryside and Right of Way Act 2000 provides statutory protection to birds, bats and other species that habit in trees. All tree work operations are covered by these provisions and advice from an ecologist must be obtained before undertaking any works that might constitute an offence. A risk assessment will be required prior to commencement of any tree work or felling to assess the likelihood of disturbing or endangering any protected wildlife or habitat.

4.4. Future consideration:

Any remaining trees should be inspected on a regular basis by a qualified arborist approximately every 3 ½ years to allow for inspection throughout different seasons of the year. To help get the best results from a follow up survey it is recommended that all Ivy-covered trees (if any) identified should be severed at ground level to allow for a clearer inspection. Severing and/or removing Ivy will also benefit the tree(s) by allowing the stems to permit gas exchange through their lenticels, small openings in the bark.

5.0 Summary

5.1 Appraisal

T1 appears to have good vitality of the leaves and good form with the structure of the tree being the bigger concern. The areas of dysfunction have in places joined up from pollard heads of different heights leading to large areas of dysfunction and hollowness. This I feel is compromising the residual wall and strength of the stem. With the context of the tree I do not feel that re-pollarding would be enough as we would be in this same situation in a few year's. Consideration has been given to not just re-pollarding but to monolith or reducing the height of the stem to reduce the lever arm but with the context I do not feel these are suitable options. After speaking with the local council tree officer who requested we only repollard the tree I am happy to accept the proposal.

5.2 Technical References

This arboricultural report is based on the following primary technical references;

1. British Standards Institution (2010) BS 3998 - *Recommendations for tree work*.
2. Mattheck, C and Breloer, H - *The Body Languages of Trees*.
3. Strouts, R.G and Winter, T.G 1994 – *Diagnosis of Ill Health in Trees*.
4. Lonsdale, D 1999 – *Principles of Tree Hazard Assessment and Management*.
5. Weber, K and Mattheck, C – *The Manual of Wood Decay in Trees*.

5.3 Statement

Every endeavour has been made to present this report in a clear fashion, with accurate information, reasonable conclusions and appropriate recommendations. The report will be reviewed and agreed before release by a second person within the company. This should ensure compliance with our quality standard. However, should you have any questions, problems or queries about this report please do not hesitate to contact us.

6.0 Photos



Photo of Fungal fruiting body approx. 4m agl in old pollard head



Photo of Fungal fruiting body approx. 4m agl in old pollard head



Photo of Fugal fruiting body approx. 4m agl in old pollard head



Photo showing old pollard head and regrowth the small hole meets up with the large cavity



Photo showing cavity on main stem above another old pollard head cavity looks like they link up.



Fungal fruiting body at top of main stem where has been previously pollarded



Closer photo of fungal fruiting body to aid identification



Large cavity just below the top of the main stem.



Photo showing depth of cavity.

Appendix I

Terms & Definitions

“Arboriculturist” – A person who has, through relevant education, training and experience, gained recognized qualifications and expertise in the field of trees in relation to construction.

“Tree site plan” – A scaled plan prepared by an arboriculturist. It is used as design tool showing the tree stem, identification number, above ground constraints (crown spread) and approximate location of the tree.

“Crown break” – The point where the crown develops from the main stem

“Bark necrosis” – Localised death of living tissue

“Minor dead wood” – Considered to be wood that is 10-50mm in diameter

“Major dead wood” – Considered to be wood that is 50mm plus in diameter

“Compartmentalize” – A natural defence process in tree where by chemical and physical boundaries are created that help to limit the spread of disease and decay.

“Compartmentalization” – Natural defence in which trees use chemical and physical boundaries to limit the spread of disease and decay.

“Bifurcation” – Natural division of a branch or stem into two or more stems or parts.

“Sapwood” – Xylem wood tissue that is active in longitudinal transport of water and minerals.

“Root plate” – The combination of large structural and smaller roots and soil near the base of a tree’s trunk, largely responsible for holding the tree erect.

“Burl” – A abnormal swelling of a tree trunk characterized by swirling wood grain and meristematic tissue.

“Occlusion (Occluding)” – A process part of Compartmentalization whereby the limiting of spread of disease and decay is visible in the form of new wood around the wound.

“Phototropism” – Influence of light on the direction of plant growth. Tendency of plants to grow toward light.

“Auxin” – Plant hormone or substance that promotes or regulates the growth and development of plants.

“Scaffold branches” – Permanent or structural branches that form the scaffold architecture or structure of the tree.

“Samara” – Dry, winged fruits that remain closed at maturity.

“Soil compaction” – Compression of the soil, often as a result of vehicle or heavy equipment traffic, that breaks down the soil aggregates and reduces soil volume.

“Structured soils” – A pavement substrate that can be compacted to meet engineering specifications yet remains penetrable by roots in the urban environment.

“Branch tail” – The Vascular trace (and former vascular trace incorporated in to the heart wood) of a branch in the parent stem helping to strengthen the branch union.

Appendix II

Explanatory Notes

Measurements/estimates: All dimensions are estimates unless otherwise indicated.

Species: The species identification is based on visual observations with the botanical name used. In some instances, it may be difficult to quickly and accurately identify a particular tree without further detailed investigations. Where there is some doubt of the precise species of tree the botanical name is followed by the abbreviation 'sp' if only the genus is known the name in order to avoid delay in the production of the report.

Diameter: These figures relate to 1.5m above ground level and are recorded in centimetres. If appropriate, diameter is measure with a diameter tape. An estimate is given to trees where it was not possible to access the trunk to accurately measure it.

Height: Height measurement is approximate and in metres.

Spread: The maximum crown spread is visually estimated from the centre of the trunk to the tips of the live lateral branches.

Life stage: In this case Y= Young establishing tree, SM Semi mature an established tree but with growth to make before reaching its potential maximum size, EM= Early mature a tree that is reaching its ultimate potential height, whose growth rate is slowing down but if healthy, will still increase its stem diameter and crown spread. M= Mature a specimen with limited potential for significant increase in size, even if healthy.

Priorities: Red = Urgent / As soon as possible. Amber = within 3 - 12 months of the survey date. Green = 12 – 18 months of the survey date work recommended in order to benefit the trees life span potential.

Max Life expectancy: Age is based on research by the Botanist and Forester Alan Mitchell.