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Bernie Harverson
arboricultural consultant



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20 JUL 2011
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Visual Tree Assessment & Tree Safety Audit

at

12 Deanswood Drive, Waterlooville

*- prepared on behalf of **Mr & Mrs Agnew**-*

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Client	**Mr & Mrs Agnew**
Site Location	**12 Deanswood Drive, Waterlooville**
Project Arboricultural Consultant:	Bernie Harverson *M.Arb.,*
Date Report Prepared	**July 2011**

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1.0 Introduction

1.1 The subject trees are two Pedunculate Oaks located in the rear garden of the residential property at ***No. 12 Deanswood Drive, Waterlooville***

1.2 I have been advised by the owners that there is an *extant* **Tree Protection Order** covering both of these trees at this property although I am not aware of the individual tree numbers or the Tree Preservation Order Number.

1.3 A ground level Visual Tree Assessment exercise was conducted on ***Tuesday 20th June 2011***.

1.4 For this investigation exercise I used a 600mm long steel auger for probing areas of suspected decay and also used a digital camera to establish a photographic record of my inspection; as well as using a pair of binoculars to inspect any noted defects in the remaining crown that could not be reached by means of the ladder.

2.0 Clients Brief

2.1 I am instructed on this occasion by **Mr & Mrs Agnew** who own the property at 12 Deanswood Drive, Waterlooville.

2.2 I am instructed to undertake a visual tree safety audit investigation to determine the safety of the trees given the owners ongoing concerns for same and the recent production of new fungal fruiting bodies around the basal areas and an increase in bark dieback and tannin/sap exudations from the trunks.

2.3 Subsequently, I am to prepare a Tree Management Strategy Report and make recommendations for the future management of these trees; making a formal application to the Council seeking approval to any recommended works.

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3.0 Assessment of Tree Condition

3.1 T1 – Pedunculate Oak (see also Tree Survey Notes at Appendix BH1)

Tree No	Species	Ht m	S or M	Trunk Diam mm	Brnch Spread m	Age	Form	Condition Comments	Rem Con in yrs	Cat
T1	Pedunculate Oak *Quercus robur*	20	S	900 at 1.1m agl	N6 E6 S6 W6	M	Poor	There has been a change in levels around the tree in the past with soil build up around the south side-this has almost certainly been the access point for the current fungal pathogen attack – crown lifted to 8m agl-fungal fruiting bodies of *Meripilus giganteus* appeared on the south side of the trunk some 12/14months ago but have not re-appeared since-has been heavily reduced and reshaped in the past	?	C/D

3.2 Roots / Basal Area

3.2.1 The rooting potential of this tree has been constrained by its circumstances as this self sown tree has rooted itself into the soil banking at the southern end of an underground air shelter which provides very little opportunity for rooting to the north side.

3.2.2 This is not an ideal situation for establishing stability and will mean that the tree has had to adapt to root opportunistically wherever it can around the sides and down below the footings of the shelter and will have extensively and preferentially rooted out into the open soft landscaped areas of the garden to the south and west and northwest sides.

3.2.3 As a result of this significant 'fingers' of surface roots can be seen exposed on the soil banking gaining whatever purchase it can from this shallow soil situation. This tree therefore relies heavily on its network of roots right down to small diameter fibrous material to support it, as opposed to any vertical tap roots.

3.2.4 Approximately 12/14 months ago the owners noticed a large clump of fungal fruiting bodies arising from the ground at the base of the tree on the south side. I have only the photograph they took at the time as evidence of what species of fungus this might be but it certainly appears to be Giant Polypore – *Meripilus giganteus*. This species of fungus by preference attacks the roots of trees and on Beech and Oak is noted for causing tree failure due to undermining the intergity of the roots and making them brittle and subject to windthrow.

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The picture taken by the owners

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3.3 Trunk

3.3.1 Partially enveloped by soil to the south side and subject in the past to changes in levels which may have damaged roots and provide the access point for fungal pathogens.

3.3.2 I probed and tapped the bark around the base of the tree and this revealed a hollow sound all around the south and west sides of the trunk to a height of 1m above ground level and in places I was easily able to prise away loose bark. The bark in these areas has delaminated and separated from the inner wood and most probably killed off the cambium in this vicinity.

3.3.3 At various places on the south and west sides of the trunk the tree is oozing a black sticky liquid which is attracting insects and I noted a lot of wasps and Hornets feeding on this material on the occasion of my site visit. This liquid is likely to be a combination of sap and tannin as the tree tries to compartmentalise the fungus and thwart its attack.

3.3.4 In my experience *Meripilus* rarely kills bark above ground and it is highly probable that there is another fungal pathogen at work here and my feeling is that this would most likely be – Honey Fungus/ *Armillaris mellea* although I was unable to confirm this with evidence of 'bootlaces or white mycelium' under the bark.

3.4 Crown

3.4.1 Currently defies all logic and is outwardly sound and healthy with normal leaf size and good vigour and vitality.

3.4.2 This tree has been heavily crown reduced and reshaped as part of an ongoing management policy.

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4.0 Conclusions

4.1 This tree is under attack from at least one and possibly two decay fungi.

4.2 At present the attack has not resulted in any extensive decay pockets in above ground portions of the trunk but has killed off large patches of bark equivalent to 50% of the circumference of the tree and in my opinion will have caused decay in the root system although this cannot be quantified.

4.3 The bark dieback has advanced significantly over this growing season and its progress has alarmed the owners and lead to them seeking professional advice.

4.4 Under normal circumstances I would have advised further investigation with Decay Detection Equipment (PICUS & Resistograph). However, this equipment cannot detect decay below ground and can add nothing to the diagnostic and management decision process.

4.5 My experience with this type of fungus is that trees often fail showing perfectly healthy crowns but when the root system is examined the roots show extensive levels of brittle decay. However, determination of at which point a tree becomes at high risk of failure is guesswork combined with a 'gut feeling' based on previous experience.

4.6 I am convinced that the lifespan of this tree is very short and that its proximity to the building means that the house is well within its 'fall zone'. This combined with my suspicions that a second decay fungus is at work and that the attack has escalated this year lead me to conclude that this tree poses a serious threat to life and property.

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5.0 Recommendations

Option	Tree Works Recommended
1	• Fell to ground level and grind out the root system to remove all food source and thus eradicate the fungus which may otherwise attack other trees in the vicinity. • Plant a replacement tree at 10m to 12m distance from the house.
2	• Do nothing at this point in time but maintain a 'watching brief' • Re-inspect at 6 monthly intervals (Winter & Summer) to try to calculate the rate of decline

5.1 In terms of managing risk and advising you on the most appropriate ongoing Tree Management Strategy - Option 1 negates the risk and mitigates the loss of amenity value by affording replacement planting thereby ensuring continuity of landscape for the future. Option 2 means that you are accepting the risk that the tree may fail in the interim and this could have an impact on your insurance cover and worse still might involve personal injury or death.

5.2 My recommendation is that the risk is unacceptable and I therefore advise you to seek Council approval to **Option 1**.

Bernie Harverson
arboricultural consultant

BH 1

Tree Survey Notes

Sketch Plan

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arboriculture consultant

TREE SAFETY AUDIT NOTES

These Tree Safety Audit Notes have been prepared in accordance with current industry guidelines; utilising my forty years of experience in arboriculture and applying common sense and a pragmatic approach, whilst at the same time recognising that safety is the paramount consideration.

- Each specimen tree or group/copse/woodland has been allocated a unique number – the numbering system is repeated on the site plans which accompany the safety audit schedule and the colour coding system applied to each grade will be repeated on the plans for ease of management. The sketch plan which normally accompanies a Tree Safety Audit Schedule will indicate the approximate location of each surveyed tree/group on site and also have the trunk circle colour coded, with a unique number positioned beside each one.
- Tree species are identified by both English Common Name and *Latin Botanical Name*.
- Height assessment is estimated by eye and dimensions are provided in metres.
- The state of the main trunks is noted and recorded as **S** for single stemmed and **M** for multi-stemmed.
- Breast height diameter (1.5m agl) is measured and shown in millimetres.
- Crown spreads are assessed to the four primary compass directions of North; East; South and West and expressed in metres.
- An assessment of a tree or groups age is made in terms of its site specific maturity as part of the surrounding landscape, taking into account its overall shape and form in that setting, and is recorded thus :-
  Y - Young tree or group; **MA -** Middle-aged tree or group; **M -** Mature tree or group; **OM -** Over mature tree or group
- An assessment is provided of the overall visual form of the tree and expressed as – **G** good; **F** Fair and **P** poor.
- Condition comments are included to describe the key features of a tree and any noted defects and health and safety issues.
- A rough estimate of a tree or groups remaining life expectancy is made and is recorded thus :-
  0 - 5; 5 - 10; 10 - 20; 20 - 30; 30 - 40 and >40 years
- The category grading for each tree/group is assessed according to a simple **A, B, C, D and V** grading system.

A - (**Green**) Trees of high amenity value of good shape and form and in a sound and healthy condition with a long life expectancy. **The only exceptions to this might be rare tree species or historical value which might also merit an A.**

B – (**Blue**) Trees of high amenity value but which are slightly misshapen or suppressed or have some other minor defect which prevents it being categorized as an A.

C – (**Brown**) Trees which are in fair overall order but have limited amenity value with no special or outstanding features.

D – (**Red**) Trees which are dead, dying, diseased, seriously dysfunctional or dangerous and will require urgent attention.

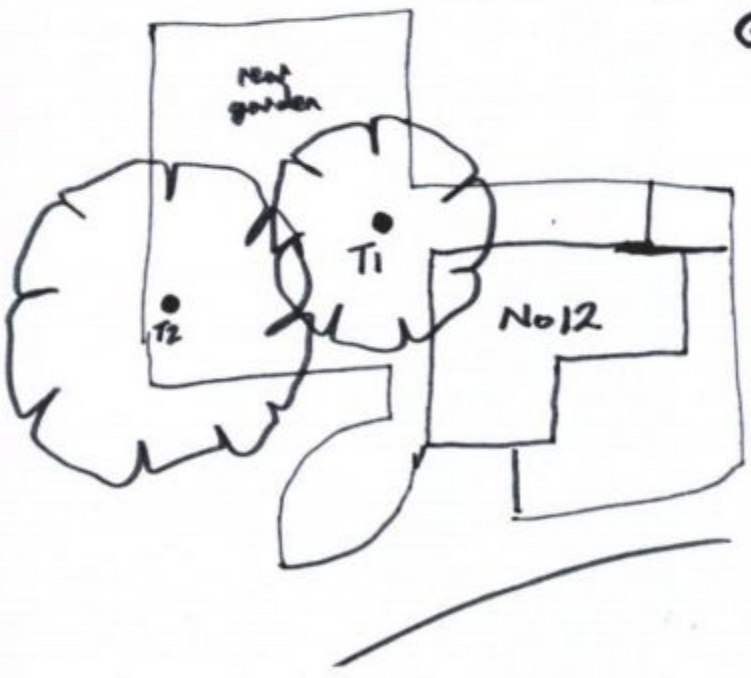
V – (Purple) Veteran trees which could be any of the above grades but which merit special attention because of their age and special requirements. In some instances a tree may have both an A and V category allocated to it.

N.B. – Because trees often do not fit neatly into one category on occasions a mid-grade may be given and in this instance the first quoted grade is the one that it would have fitted into had there not been something which undermined this but was not so significant that it warranted dropping a full grade.

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T1 ENGLISH OAK
Quercus robur



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Bernie Harverson
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BH 2

Qualifications & Experience

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QUALIFICATIONS AND EXPERIENCE

- My name is Bernie Harverson and I am a self employed independent arboricultural consultant in private practice. I take instructions primarily in the South of England but also on occasions work nationwide and abroad and have offices at : –
  3 Foxcombe Cottages, South Harting, West Sussex GU31 5PL and at Cedar Court, 5 College Street, Petersfield GU31 4AE
- I hold the following arboricultural qualification - **Master of Arboriculture** (Royal Forestry Society – 1976)
- I have over **forty** years of practical and managerial experience in the arboricultural industry including periods in both the public and private sectors.
- My Local Government sector experience comprises one year as a tree surgeon with Brighton Parks and nine years spent in Arboricultural Officer posts with both Westminster City Council and Portsmouth City Council
- My past practical experience in the private sector includes two years at Tilhill Forest Nursery and over ten years for various companies as a Climbing Arborist/Tree Surgeon.
- Managerial work in the private sector includes two years as manager of Beechings tree surgery company and twelve years with CBA Trees as an Arboricultural Consultant.
- As an independent self employed Arboricultural Consultant I now provide a comprehensive range of services including :-
  tree surveys, appraisals, assessments and inspections with particular reference to planning and development and tree safety audits with a service offered as a climber to undertake full climbing inspections to better understand the condition of a given tree before prescribing a management strategy.
- I also undertake litigation work appearing as an Expert Witness in Court Actions and at Planning Appeals, Hearings and Public Local Inquiries.

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