



GROUND LEVEL AND VISUAL INSPECTION OF ONE PINE TREE Rev:0,

at:

**St Joseph's College,
Upper Redlands Road,
Reading,
RG1 5JT,**

for:

**Rachel Sheridan,
Estates Bursar.**

Job no. MJC-18-0181

17th September 2018.

Mark Carter

FICFor. MRICS RCarborA Dip. Arb. (RFS),
Managing Director,
MJC Tree Services Limited,
89 Hampton Lane,
Blackfield,
SOUTHAMPTON,
SO45 1WL.
(023) 80 897763.

mjc@mjctreeservices.co.uk



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1.0 Instructions

1.1 I have been instructed by Rachel Sheridan, as follows:

“Re: One Pine Tree at St Joseph’s College, Upper Redlands Road, Reading, RG1 5JT.

To visit the above site and carry out the following works:

- To carry out a ground level and visual inspection of one Pine tree, that will need to be identified to me whilst on site, for health and safety and general sound management reasons:*
- To discuss the condition of the tree and its required management with yourself, and if requested to do so, with other members of the College staff:*
- To report my findings, conclusions, and any recommendations in the form of a brief letter report:*
- To apply to the Local Planning Authority for permission to carry out any and all the recommended works:*
- To supply a copy of my letter report and application via email as a .pdf (Adobe) file.”*

2.0 Report Limitations

2.1 The inspection was carried out from ground level using visual observation methods only. Should a more detailed inspection be required then this will be highlighted in the recommendations.

2.2 Trees are living organisms whose health and condition can change rapidly. The health, condition and safety of trees should be checked on a regular basis, preferably at least once a year. The conclusions and recommendations in this report are based only on the author’s observations made on the day of the survey.

2.3 I have been informed by my client that the tree in question is protected by a Tree Preservation Order (TPO). If this is the case, no works may be carried out on the tree without first gaining the written permission of the Local Planning Authority (LPA). The only exception to this requirement is if the tree is imminently dangerous, in which case any works required to reduce/eliminate the imminent danger can be carried out without reference to the LPA. However it is necessary to prove, after the event, that the tree was in fact imminently dangerous for this exemption to provide a defence against possible prosecution for carrying out unauthorised works on a TPO'd tree.

2.4 The author of this report is a:

- Fellow of the Institute of Chartered Foresters:
- Registered Consultant of the Arboricultural Association:
- Chartered Arboriculturist:
- Chartered Surveyor:
- Registered Consultant of the Institute of Chartered Foresters.

He has been a licensed operator of the Quantified Tree Risk Assessment (QTRA) system since 2005, license no. 1043, he also holds the Royal Forestry Society’s Professional Diploma in Arboriculture and has over 20 years experience in UK arboriculture. A full CV and CPD record is available as a .pdf file upon request to the above office.

- 2.5 This report is for the sole use of the above-named client and refers only to those trees identified within. It may not be reproduced in whole or in part, or sold, lent, hired out or divulged to any third party not directly involved in the subject matter, without our consent. Use by any other person(s) in attempting to apply its contents for any purpose other than stated in this report renders the report invalid for that purpose.
- 2.6 This report is supplied subject to our terms and conditions in force at the time of our instruction by the client.

3.0 Introduction

- 3.1 I visited the site and carried out my inspection on the 14th September 2018. In order to accurately identify the tree to be inspected, I met with the client at the outset of the inspection and was taken to the tree.
- 3.2 The location of the tree is illustrated in the Google Maps image included at Appendix 1 of this report.
- 3.3 I have been informed by my client that the tree has been showing increasing signs of crown dieback over recent years, and that an inspection was carried out last year by another arboriculturist. This other arboriculturist suspected that the dieback was the result of Red Band Needle Blight, a fungal infection of the foliage, but despite taking samples from the tree that were analysed by the Bartlett Laboratories, no confirming evidence of Red Band Needle Blight was identified.
- 3.4 Four photographs are included at Appendix 2 of this report to illustrate specific parts of the tree and these are referred to at various points in the following report.

4.0 The Tree

- 4.1 The tree in question is a Corsican pine *Pinus nigra var. laricio*.
- 4.2 The tree is an early mature to mature specimen (BS5837:2012), and has extensive crown dieback as illustrated in Figures 1 and 2 of Appendix 2. This dieback is killing the distal or outer parts of the crown in the mid and lower parts of the crown. This pattern of distal foliage killing is illustrated in Figure 3 of Appendix 2.
- 4.3 The crown contained large quantities of small diameter deadwood as a result of this ongoing crown dieback. However, these all seemed to be sufficiently small in diameter and light in weight to pose very little risk of causing significant harm to persons or property as a result of them falling from the crown.
- 4.4 The larger diameter crown branches and the trunk did not seem to be decayed or otherwise unstable.

- 4.5 Resin discharges were present on the trunk bark surface of the tree, however these were not associated with any visible boring insect holes or other physical bark damage and it is likely that these discharges are the result of micro bark fractures caused by a combination of drought/heat stress during the exceptionally hot and dry summer we have just experienced.
- 4.6 A small lower crown branch was removed from the tree to allow a closer inspection of the dieback. Technically this branch removal required the permission of the LPA, however I took the liberty of authorising its removal as I needed to inspect the dieback closely to carry out my instructions, and the removal of the branch had no appreciable detrimental impact on the public visual amenity of the tree.
- 4.7 Inspection of the removed branch confirmed that the distal parts of the shoots are being killed. Dissection of the killed shoot buds revealed dry buds filled with a brown frass, and containing small white/pale grey grubs approximately 1mm in diameter and 2-3mm in length. Figure 4 at Appendix 2 of this report illustrates the dissected bud and the grub in question. Unfortunately this picture is not very clear as the camera struggled to focus correctly when so close to the subject.

5.0 Conclusions

- 5.1 Red Band Needle Blight is commonly found on Corsican pines, and it is so potentially debilitating to this species in commercial forestry environments that the Forestry Commission declared a moratorium to its planting several years ago. Therefore it is not unreasonable that the arboriculturist carrying out the previous inspection of this tree initially suspected that this was the cause of the dieback. However, Red Band Needle Blight kills the older foliage first, leaving the younger distal foliage alive for longer. The pattern of dieback in this tree is clearly distal first, the opposite of the pattern of killing by Red Band Needle Blight, so I am a little surprised that the arboriculturist took samples to test for this fungus when it clearly could not be the cause of the dieback.
- 5.2 The crown dieback is the result of the distal parts of the shoots and the buds being killed by a boring insect. The symptoms of this dieback are similar to those caused by Pine Shoot Moth *Rhyacionia buoliana* (Strouts & Winter 2004) although they are not completely consistent with the symptoms described in that text. I believe that this insect can only be confidently identified by taking and sending samples for laboratory analysis, however, this expense may not be justified on the basis that the dieback is being caused by the larval stage of either this, or a similar insect, and that the results of this infestation and the treatment options available are very likely to be identical.
- 5.2.1 The referenced text states that control is rarely practicable as it involves the application of 'a *potent contact insecticide*' two weeks apart timed to coincide with the hatching of eggs. Given that the tree is next to a public highway and residential dwellings, as well as being in the grounds of a school, the traditional application of this type of insecticide as a foliar spray is unlikely to be acceptable for reasons of health and safety.

5.2.2 An alternative and safer means of insecticide application would be stem injections using an application system such as the Bite Tree Infusion system <https://www.sorbus-intl.co.uk/bite-tree-infusion-hi-tech> . The Bartlett Tree Expert company would be able to carry out this stem injection service. However, this is likely to be an expensive service given that the equipment required and expertise to use it is not widely available. Economically I would suggest that this expense would be better incurred removing this tree and replacing it with a new healthy tree of a different species, however, as the tree is protected by a TPO, this course of action would need the agreement of the LPA.

5.3 Given that the symptoms of crown dieback have been reported for several years, and that the extent of dieback is reported to be increasing year on year, I doubt that the tree will naturally recover and regain its past vitality, and it will continue to decline. The structural condition of the tree means it does not currently pose an unacceptable risk of harm to persons or property through mechanical failure i.e. trunk and/or crown branch breakage. Therefore no works are currently identified for health and safety reasons and the tree could be allowed to continue to deteriorate. However, if it is retained it will require annual inspection and risk assessment until such time as it dies or is removed.

6.0 Recommendations

- 6.1 Apply to the LPA for permission to remove this tree on the grounds that it is in terminal decline as a result of insect damage of the shoots and buds, and agree to replace this tree with a new tree, the species and location of which to be agreed with the LPA following discussion.
- 6.2 If the tree is to be retained, have a competent arboriculturist inspect and risk assess the tree on an annual basis, starting twelve months from the date of this inspection.
- 6.3 All tree work should be carried out to British Standard 3998:2010 'Recommendations for Tree Works' as a minimum standard.

Mark Carter

FICFor. MRICS RCArborA Dip. Arb. (RFS)

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7.0 Appendices

Appendix 1 – Google Maps Location Plan



Imagery ©2018 Google, Map data ©2018 Google 10 m

Appendix 2 Photographs



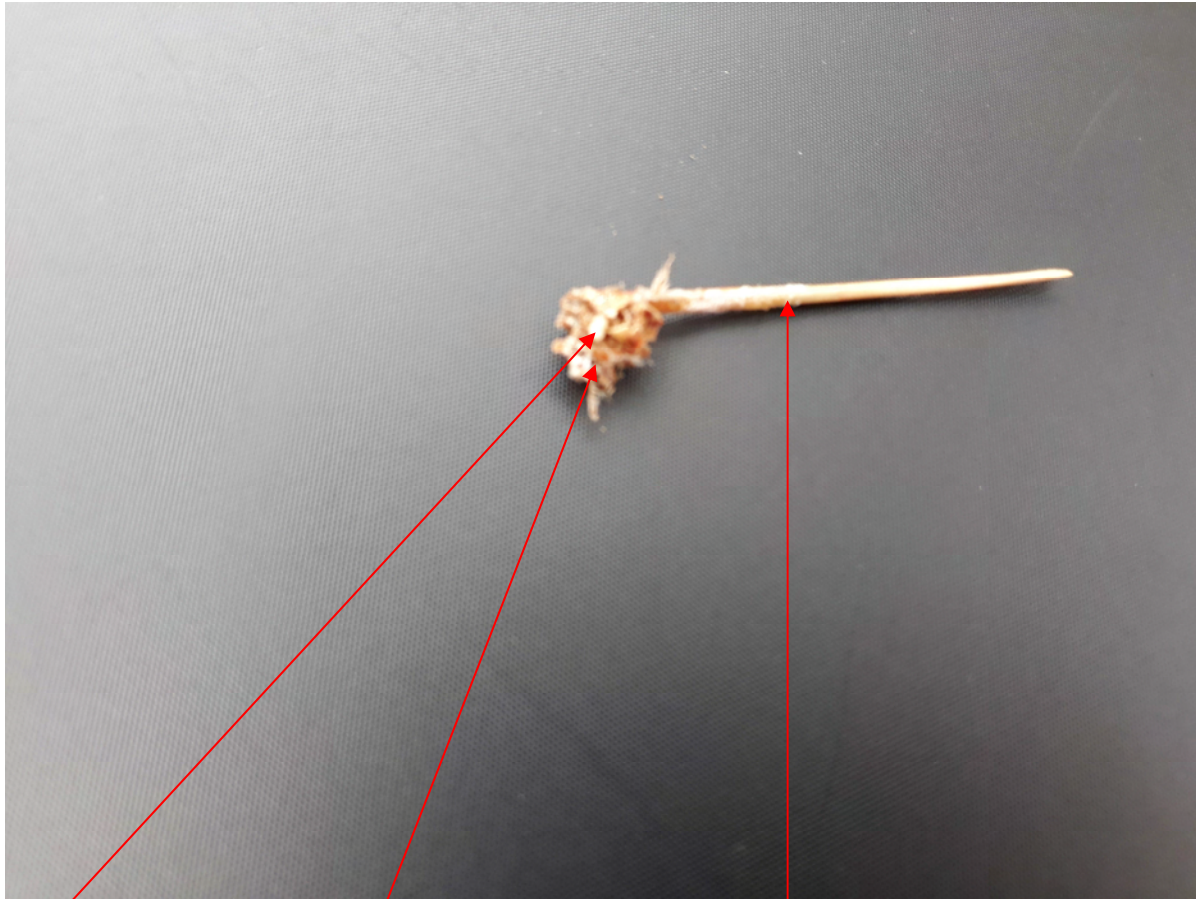
Figure 1 – view of the tree from the east, illustrating the crown dieback.



Figure 2 – view of the tree from the west, illustrating the crown dieback.



Figure 3 – close up of lower crown branch removed for the purpose of the inspection. Note that the distal part of the shoots are killed, whereas older foliage further back along the branch are still alive.



Grub

Killed & dissected bud

Killed needle

Figure 4 – Close up of dissected bud.

Appendix 3 References

- BS5837:2012 = British Standard 5837:2012 'Trees in relation to design, demolition and construction – Recommendations'.
- Strouts and Winter 2004 = Strouts, R.G., Winter, T.G., (2004) *Diagnosis of Ill Health in Trees* (second impression). In: Forestry Commission, Office of the Deputy Prime Minister; Research for Amenity Trees. TSO, England. pp211-212.
- BS3998:2010 = British Standard 3998:2010 'Tree work – Recommendations'.