

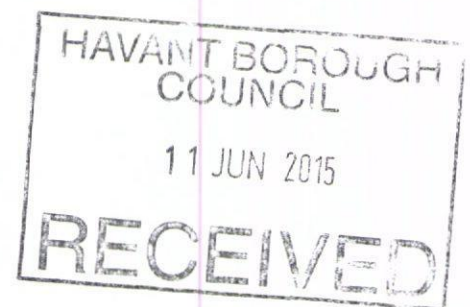
Johnston Tree Consultancy
Arboricultural & Forestry Solutions

Arboricultural Report

45 HULBERT ROAD
WATERLOOVILLE
HAMPSHIRE
PO7 7NX

MAY 2015

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1.0 INTRODUCTION

- 1.1 This report was instructed by Mr. Hamilton. The report details all trees over 75mm at 1.5m above ground level that are relevant to the siting of the proposed development at 45 Hulbert Road, Waterlooville, Hampshire. The position of the trees on the site is illustrated at **Appendix 1** on the topographical survey plan.
- 1.2 The existing tree stock has been identified and graded in line with the current British Standard BS 5837 2012: Trees in Relation to Design, Demolition and Construction - Recommendations to enable informed decisions to be made regarding tree retention. The report also details methods of construction to be implemented to safeguard the retained trees.
- 1.3 This report details the constraints placed on the proposed development from the rooting area of the trees below ground and above ground by their size and position.
- 1.4 This report will therefore inform the planning process for the proposed development to minimise any negative impact on the existing tree stock and ensure that retained trees shall be in harmony with the proposed development enabling their long-term retention.

2.0 SITE VISIT

- 2.1 The site visit was undertaken on 14th May 2015. The trees were surveyed visually, externally and from ground level only. No samples or internal decay detection readings were taken for further analysis. All dimensions have been measured unless stated otherwise. Weather conditions at the time of the survey were dry, overcast with a light breeze.

3.0 SITE DESCRIPTION

- 3.1 The site is located in Waterlooville Hampshire in a residential area. The site currently comprises a detached property set in a large garden consisting mostly of lawn area with a small stream at the bottom of the site with a row of trees along the northern boundary.

4.0 TREE SURVEY DATA

- 4.1 In accordance with British Standard BS 5837 2012: Trees in Relation to Design, Demolition and Construction – Recommendations, the characteristics of trees over 75mm stem diameter measured at 1.5m above ground level (or immediately above root flare if multi-stemmed) have been recorded. The following tree data tables should be read in conjunction with the annotated site plan shown at **Appendix 1** and the legend after the tables.

Tree Number and Species	Height (m)	DBH (mm)	Branch Spread (m)				Existing Height Above Ground Level of Canopy and 1 st Significant Branch (m)	Age Class	Estimated Remaining Contribution (Years) & Physiological Condition	Comments	BS Category & Tree Work Necessary for Development	RPA (m ²)	RPA (m)
			N	S	E	W							
T1 English Oak <i>Quercus robur</i>	18	590	5	4	5	6	7 7 East	SM	40 Fair	Not covered by TPO. Ivy on stem. Lower stem appears sound with no obvious defects. Stem bifurcates at 1.8m; included union with bulge on the north side currently appears sound. Previous management old pruning stubs, poor form. No immediate work required.	B2 Retain and protect	163	7.2
T2 English Oak <i>Quercus robur</i>	21	1140	10	12	10	9	2 4 South	M	40 Good	T6 of TPO. Deep fold between buttress roots on north side of tree, no sign of decay or lost limb at this point. Ivy on south side of stem limited inspection of base and lower stem. Stem bifurcates at 2.5m, union currently sound. Minor dead wood and Squirrel damage. Form typical of species. No immediate work required.	B2 Retain and protect Crown raise to 4m removing material no greater than 150mm diameter		

Tree Number and Species	Height (m)	DBH (mm)	Branch Spread (m)				Existing Height Above Ground Level of Canopy and 1 st Significant Branch (m)	Age Class	Estimated Remaining Contribution (Years) & Physiological Condition	Comments	BS Category & Tree Work Necessary for Development	RPA (m ²)	RPA (m)
			N	S	E	W							
T3 English Oak <i>Quercus robur</i>	18	660	7	5	4	4	8 8 North	EM	> 10 Poor	Possibly T7 of TPO, plan unclear. Adjacent to dead Oak. Areas of damaged bark falling off from ground level to 2m. Major dead wood and significant die back 40% - 50% of crown. Past management. No immediate work required. Advisory: Apply to remove under TPO regulations.	C2 Retain and protect	191	7.8
T4 English Oak <i>Quercus robur</i>	17	520	2	10	4	8	2 5 South	SM	40 + Fair	Possibly covered by TPO, plan unclear. Sound base and lower stem. Ivy on stem. Previous past management, old flush cuts. Asymmetric crown. Poor form. Good vigour. No immediate work required.	B2 Retain and protect	124	6.3
T5 English Oak <i>Quercus robur</i>	18	550	3	9	6	4	3 5 West	M	> 10 Poor	Covered by TPO but unclear which tree. On raised bank. Holly and Bramble limited inspection of base. Major dieback evident, 70% of crown. Major dead wood. No immediate work required. Advisory: Apply to remove under TPO regulations.	C2 Retain and protect	137	4.2

Tree Number and Species	Height (m)	DBH (mm)	Branch Spread (m)				Existing Height Above Ground Level of Canopy and 1 st Significant Branch (m)	Age Class	Estimated Remaining Contribution (Years) & Physiological Condition	Comments	BS Category & Tree Work Necessary for Development	RPA (m ²)	RPA (m)
			N	S	E	W							
TG1 English Oak, Common Yew, and Ash <i>Quercus robur</i> , <i>Taxus baccata</i> and <i>Fraxinus excelsior</i>	Up to 12	Up to 400	10			24	2	SM EM	20 – 40+ Poor Fair Good	Some of the Yews are subjects of the TPO, plan unclear. Trees in varying condition forming understory. Trees not inspected individually. Significant in terms of screening and wildlife. Some dead wood, one tree dead, several in decline. No significant past management. No immediate work required. Advisory: Seek clarification from Havant B.C. regarding which trees are protected. Remove dead tree and dead wood from others where required. Large Corsican Pine with significant lean not part of understory but covered by TPO should have detailed inspection with regard to safety.	B2 C2	72	4.8

Key to Terms

- Identification numbers have been used and correspond to the site plan shown at **Appendix 1**.
- Vegetation type has been categorized as one of the following: Tree (T), Hedge (H), Shrub (S), Group (G), Stump (ST)
- Species are listed by common and botanical name where appropriate.
- Where possible, measurements have been made in accordance with the conventions detailed below. Where this was not possible, due to site conditions or the vegetation being in third party ownership, dimensions have been estimated. * Indicates estimated measurement.
- Height has been recorded to the nearest half metre.
- Stem diameter has been measured at 1.5m and recorded in millimetres, except where forking or swelling has meant that this is not possible, stem diameter has then been recorded at the narrowest point below these features. Multi-stemmed trees have had individual stems measured at 1.5m. Where this was not possible the actual height where the diameter was measured is recorded. G.L. = Ground Level.
- Crown spread has been recorded to the nearest half metre. Rounded up for dimensions up to 10m and the nearest whole metre for dimensions over 10m.
- Age class has been recorded as follows:

Y S/M E/M M O/M	Young recently planted or establishing tree that could be transplanted without specialist equipment, i.e. up to 12-14cms-stem girth. Semi mature. An established tree but one that has not reached its potential ultimate height and has significant growth potential. Early mature. A tree reaching its ultimate potential height, whose growth rate is slowing down but will increase in stem diameter and crown spread, and has a safe life expectancy. Mature. A mature specimen with limited potential for any significant increase in size but with a reasonable safe life expectancy. Over mature. A senescent or moribund specimen with a limited safe life expectancy. Possibly also containing significant structural defects with attendant safety and/or duty of care implications.
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- Physiological Condition has been recorded as Good, Fair or Poor.
- Recommendations for tree management have been based on current Arboricultural Best Practice as set out by the Arboricultural profession and all relevant publications.

5.0 TREE QUALITY ASSESSMENT

- 5.1 The trees have been categorized according to BS5837: 2012 as a guide to their condition and value in terms of visual amenity.
- 5.2 The trees are coloured on the plan attached at **Appendix 1** and the colours are explained in the key of the plan.

6.0 ROOT PROTECTION AREAS

- 6.1 In accordance with BS5837: 2012, the root protection area (RPA) of the trees has been calculated and shown in the following table and on the plan attached at **Appendix 2**.

Table 2 Root Protection Area

Tree No	RPA in m ²	Recommended radial distances for RPAs (in metres from the centre of the tree to protective fencing)
T1	163	7.2
T2	598	13.8
T3	191	7.8
T4	124	6.3
T5	137	6.6
TG1	72	4.8

7.0 LEGAL CONSTRAINTS

- 7.1 Some of the trees are subjects of Tree Preservation Order 1393 St. Michael's Convent Land adjoining Hulbert Road and Hermitage gardens, Waterlooville. The TPO was served by Havant Borough Council in June 1989. It is an old TPO and it is unclear which trees are actually covered due to the poor plan and several trees having died. Prior to any work in this report being undertaken advice should be sought from the Tree Officer at the Council to determine which trees are included in the TPO.

8.0 ARBORICULTURAL IMPLICATIONS ASSESSMENT

8.1 Description of Proposed Development

It is proposed to establish a log cabin in the large area of garden to the north of the existing property. The approximate dimensions of the cabin are to be 18m x 6m and the proposed location is shown on the plans accompanying this report

8.2 Drawings Used

An OS site plan was supplied at the time of survey showing the existing site layout. The proposed location of the cabin was added to this with the locations of the trees pertinent to the proposal.

8.3 Direct Loss of Trees

The proposal will not require the removal of any of the trees contained within this report. Some minor tree work to T2 Oak will be required to ensure no damage to above ground parts during the construction process.

8.4 Position of Trees in Relation to Proposed Development

It is not considered that the proposal will increase future pressure to fell any trees retained on the site.

8.5 Protective Barriers

Protective barriers in accordance with Figure 2 of BS 5837: 2012 (**Appendix 4**) should be erected around the trees to be retained. The fencing is to be supported with an appropriate stabilizing system (**Appendix 5**). Where possible, the positions of these fences should be based on a distance equivalent to the radius of each tree's RPA. All site personnel shall be made aware of the importance of root protection areas and shall ensure that they are properly maintained at all times. Once established the fencing will define the boundary of the Construction Exclusion Zone (CEZ).

Once erected all weather signage should be displayed stating 'Construction Exclusion Zone'.

No development works shall commence within the CEZ until written confirmation has been obtained from the Local Planning Authority. The project Arboriculturalist shall supervise all work within the RPAs.

8.6 Ground Protection

Ground protection to tolerate machinery will be established to prevent soil compaction if required. Details are in the Arboricultural Method Statement section of this report

8.7 Changes in Ground Surface within RPAs

There are no proposed changes to the existing ground surface within the RPAs of the retained trees.

8.8 Changes in Ground Level within the RPA

There are no proposed changes in the existing ground levels within the RPAs of any retained tree.

8.9 Services

No overhead services are proposed.

No underground services are to be installed within the RPAs of any retained tree.

8.10 Foundations within RPAs

No foundations are to be excavated within the RPAs of the retained trees.

8.11 Access for Machinery and Site Storage

There is ample space on site for the storage of materials, machinery and the provision of site toilets outside of the RPAs of any retained tree.

9.0 CONCLUSIONS

9.1 The trees on the site are of a moderate quality predominately providing a screening/softening role.

9.2 T2 Oak will require a minor crown raised on the south side of the crown to prevent damage to above ground parts during the installation of the cabin.

- 9.3 The establishment of the protective barriers should be supervised by the Project Arboriculturalist and confirmation of adherence with the Arboricultural Method Statement and Tree Protection Plans should be made to the Local Authority Tree Officer before any development starts.
- 9.4 Ground protection to tolerate machinery should be installed within the RPAs of T1 Oak, T2 Oak and T3 Oak if required.
- 9.5 Given these conclusions the following section 'Arboricultural Method Statement' details the recommendations/methodology for the construction of the proposed works in terms of the effect on trees on the site.

Details within this AIA are considered correct at the time of writing but modifications may need to be made as more information becomes available.

Important Notes

The comments made with regard to the health and stability of the trees within this report were correct at the time of inspection. It should be recognized that trees are dynamic structures that can never be completely predictable and may become unstable or partially unstable even in average weather conditions. Changes can occur not only to environmental triggers but also in response to biological or mechanical events.

Inspection Caveats

The inspection was carried out from ground level. Binoculars were used to observe features higher in the canopies.

Foliage, extension growth and/or bud proliferation were assessed visually.

No soil or tissue samples were taken during this inspection.

No invasive diagnostic equipment was used to detect decay.

A nylon hammer was used to test for possible decay and dead or loose bark around the lower stems and bases of the trees.

Ivy has been removed during the inspection process only where reasonable and practicable. Where this has not been possible it has been noted as a recommendation to be removed to allow detailed re-inspection.

No tree is ever absolutely safe due to the unpredictable laws and forces of nature.

ARBORICULTURAL METHOD STATEMENT**1.0 CONTACT DETAILS**

Developer	Unknown	
Architect	None	
Arboricultural Consultant	Sarah Johnston M.Arbor.A. B.Sc. (Hons.) Arboriculture	Johnston Tree Consultancy 16 Manor Close, Wickham, Hampshire, PO17 5BZ 07814 403146 johnstontreeconsultancy@gmail.com
Local Authority Case Officer	Unknown at Present	Havant Borough Council Public Service Plaza, Civic Centre Road, Havant, PO9 2AX 02392 44 60 19 planning.development@havant.gov.uk
Local Authority Tree Officer	Jamie Gargett	Havant Borough Council Public Service Plaza, Civic Centre Road, Havant, PO9 2AX 02392 44 60 19 jamie.gargett@havant.gov.uk

2.0 INTRODUCTION

- 2.1 This Arboricultural Method Statement (AMS) has been produced in line with BS 5837 2012: Trees in relation to design, demolition and construction-Recommendations to aid the successful retention of trees on and adjacent to the proposed development at 45 Hulbert Road, Waterlooville, Hampshire. No development shall take place on the site until this document has been submitted to and approved in writing by Havant Borough Council.
- 2.2 This document sets out the methodology for all proposed works that affect trees on and adjacent to the site. Compliance with this method statement will be a requirement of all relevant contracts associated with the development proposals. Copies of this document will be available on site for inspection.
- 2.3 For details of trees to be retained and location and types of special protection methods, reference should be made to the Tree Protection Plan (TPP). A copy of which should be displayed prominently on site.

3.0 PHASING OF DEVELOPMENT

3.1 Phase 1 – Pre Development Phase

Tree Work

T2 Oak - Crown raise to 4m removing material no greater than 150mm diameter

Tree work is to be undertaken by professional tree surgeons suitably qualified and insured and in line with BS 3998 2010 Tree Work – Recommendations.

Protective Barriers

Tree protection measures to be installed under the supervision of the retained Arboriculturalist for all the trees in accordance with the Tree Protection Plans **Appendix 3**.

The protective barriers erected will be in accordance with Figures 2 and 3 of BS 5837:2012 **Appendix 4 and Appendix 5** and will form the boundary of the construction exclusion zone (CEZ). Where feasible, the positions of the fencing will be based on a distance equivalent to the radius of each tree's RPA. Once erected all weather signage should be displayed stating 'Tree Protection Area Keep Out'.

Ground Protection

Ground protection to tolerate machinery is required and it will be established within the RPAs of the retained trees, as shown on the Tree Protection Plan at **Appendix 3**. It will comprise Grassform Trakmats or a similar product to spread the load.

Materials: Access and Storage

The existing access driveway and garden will be used for access. Storage will be outside of any of the retained trees RPAs. See Tree Protection Plan **Appendix 3**.

3.2 Phase 2 – Construction Phase

Protective Barriers

Once established the protective barriers are not to be moved without written consent from Havant Borough Council.

4.0 **GENERAL ARBORICULTURAL CONSIDERATIONS**

- 4.1 Protective barriers must be regarded as sacrosanct, and must only be moved under direct supervision of the LPA or named Arboriculturalist to enable the undertaking of works within the RPAs of trees, as set out in this AMS, and approved in writing by the LPA. It is of paramount importance the fencing is repositioned correctly after any agreed operations.
- 4.2 No materials, chemicals, machinery or vehicles must be stored within the RPAs as defined on the TPP and identified on site by protective fencing and aboveground root protection.
- 4.3 Ground protection must not be lifted or removed without prior consultation with the LPA or named Arboriculturalist.
- 4.4 Damage caused to protective fencing or ground protection must be reported to the site supervisor and the named Arboriculturalist to ensure appropriate repair.
- 4.5 Any damage to retained trees must be reported without delay to the site supervisor, the LPA and the named Arboriculturalist so appropriate remedial work can take place without delay.
- 4.6 No materials that are likely to have an adverse effect on tree health such as oil, bitumen or cement will be stored or discharged within 5 metres of the trunk of the retained trees or any other trees on the site.
- 4.7 No fires will be lit on site.
- 4.8 Notice boards, telephone cables or any other signage or services are not to be attached to any part of the retained trees.

5.0 SUPERVISION AND MONITORING

5.1 The project Arboriculturalist shall be responsible for monitoring/supervising the following works.

- Establishment of protective barriers.

5.2 The project Arboricultural Consultant will be responsible for periodical monitoring and will inspect the protective fencing to ensure the CEZ is intact and monitor any works necessary within the exclusion zone. A record of site visits will be maintained for inspection on site and copies forwarded to the agent and planning authority when requested.

Please note this AMS is not a contract. The retention and services of a project Arboriculturist for supervision and monitoring must be agreed prior to commencement of construction operations.

CREDENTIALS OF THE AUTHOR

Sarah Johnston M. Arbor. A., B.Sc. Arboriculture has worked in the Arboricultural profession for thirteen years. Her experience has been gained from undertaking practical tree work as well as working as an Arboricultural Surveyor and Tree Officer for Eastleigh and Havant Borough Councils respectively. In addition Sarah worked as a consultant for Marishal Thompson for two years from 2005 when she became self-employed. Sarah is a Professional Member of the Arboricultural Association and holds Professional Indemnity Insurance cover trading as Johnston Tree Consultancy.

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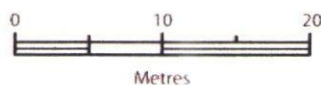
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APPENDIX 3 - TREE PROTECTION PLAN

- RPA in meters radially from the centre of the stem
- Protective barriers
- CEZ Construction exclusion zone

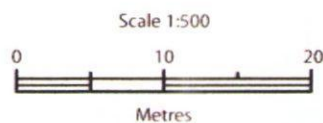


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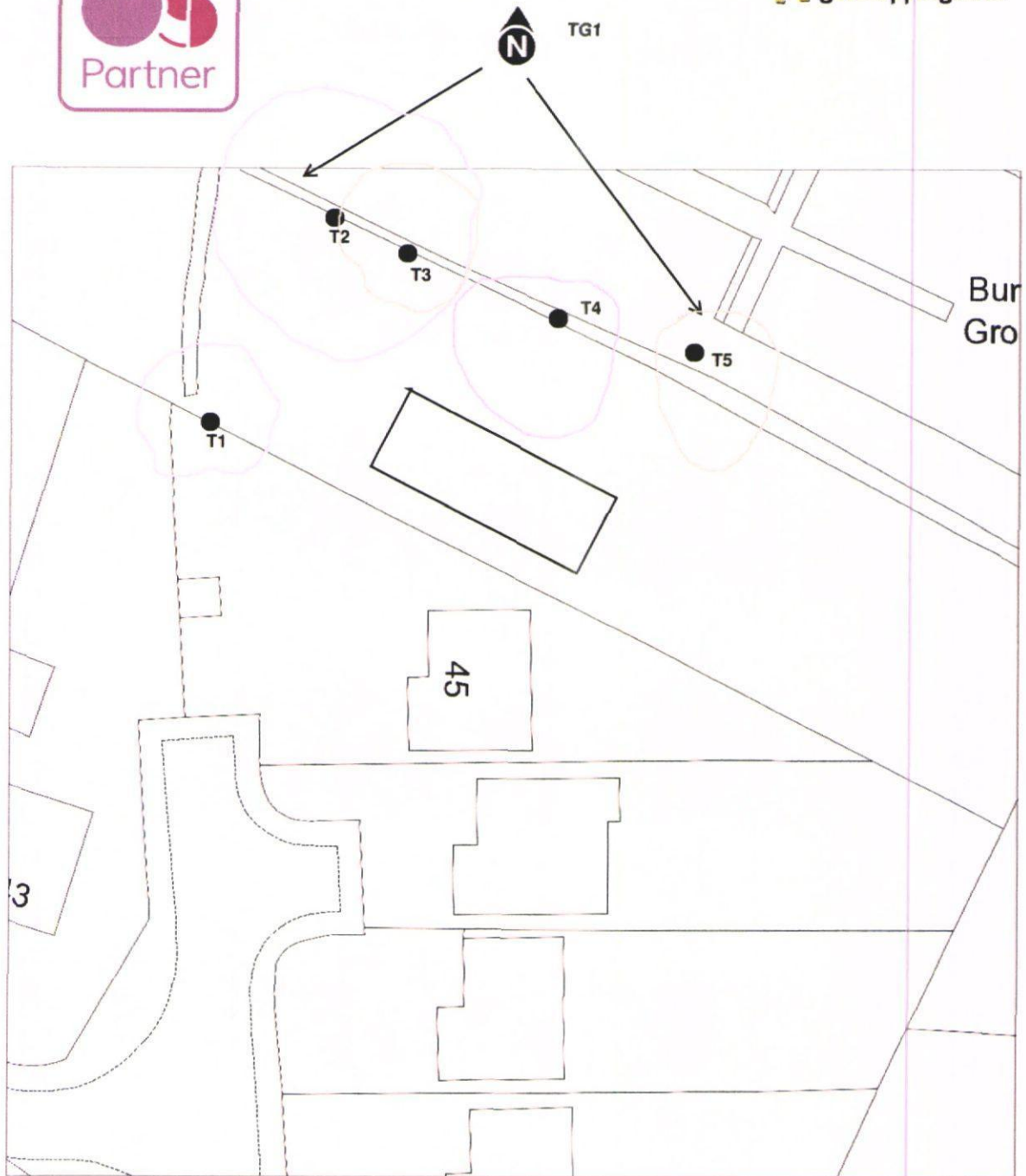


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APPENDIX 2 - ROOT PROTECTION AREA PLAN

 RPA in meters radially from the centre of the stem

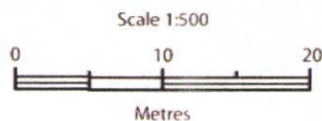


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APPENDIX 1 - TREE QUALITY ASSESSMENT PLAN

- Tree of moderate quality
- Tree of low quality