

Tree Survey & Arboricultural Impact Assessment

Salterns House, No. 1 Salterns Close, Hayling Island, Hampshire PO11 9PL

June 2016



Report Name: Tree Survey and Arboricultural Impact Assessment

Our Reference: 15/03/24/NH

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Summary

This is a tree survey and arboricultural impact assessment.

The report has been written following the recommendations and guidance given within British Standard 5837:2012 Trees in relation to design, demolition and construction.

The proposed development is to construct a single new residential dwelling.

None of the trees on or immediately adjacent to the site are the subject of a Tree Preservation Order and the site does not lie within a designated Conservation Area.

I have inspected all the trees of material consideration within and immediately adjacent to the proposed development site. These trees are listed at Appendix 1 as T1 to T8 inclusive and annotated on the Tree Plan at Appendix 4.

The proposed development requires the removal of a section of H2 to create a new access.

The proposed development will or may require T4 to be pruned.

The proposed development will or may encroach within the root protection areas of H2, T3, T4, T5, T6 and T7.

The shadow patterns of retained trees will not cause unreasonable obstruction of direct sunlight to the proposed development.

The retained trees should not cause undue apprehension to occupiers or users of the proposed building or space.

Due consideration has been given to the proximity of retained trees.

Due consideration must be given to the access and working area required to enable the construction of the proposed development.

No overhanging tree canopies should be damaged by the construction activity.

Due consideration must be given to requirements of infrastructure including above and below ground services.

It will be necessary, prior to commencement of any construction activity, to provide Havant Borough Council with an Arboricultural Method Statement, a Tree Protection Plan and a Schedule of Arboricultural Supervision in order to safeguard the retained trees.

Nicholas Hellis MArborA AIEMA

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1.0 Instructions

- 1.1 I have been instructed in writing by Mr. Richard Murray of Murray Planning Associates to prepare a tree report on behalf of Mr. and Mrs Spraggs to assess the influence that the trees on and adjacent to the site may have on any proposed development and vice versa.
- 1.2 The proposed development is to construct a single new residential dwelling.

2.0 Report Limitations

- 2.1 Trees are living organisms whose health and overall condition can change rapidly. The conclusions and recommendations contained within this report are valid for a period of three years. The period of validity may be reduced if significant changes occur to either the trees or to the landscape within the immediate proximity of the trees.

3.0 Introduction

- 3.1 The report has been written following the recommendations and guidance given within British Standard 5837:2012 Trees in relation to design, demolition and construction - Recommendations (hereinafter BS:5837).
- 3.2 The report is intentionally concise with minimal background explanations. Where appropriate, further guidance and information is included as appendices.
- 3.3 The report contains the following appendices:
 - a) a tree survey and a tree quality assessment at Appendix 1;
 - b) a cascade chart for tree quality assessment at Appendix 2;
 - c) site photographs at Appendix 3; and
 - d) a scale drawing showing existing site features and the proposed development. This drawing has been amended to show tree quality assessment, root protection areas and shadow patterns, as appropriate and should be read in conjunction with this report at Appendix 4.

4.0 Report Rationale

4.1 The following rationale underlies this report:

- a) to identify the quality and value (in a non-fiscal sense) of the existing tree stock within the context of proposed development, allowing informed decisions to be made concerning which trees should be removed or retained in the event of development occurring;
- b) to identify the constraints and considerations, both above and below ground, associated with retained trees in the context of proposed development. However, care should be taken to avoid misplaced tree retention; attempts to retain too many or unsuitable trees on a site can result in excessive pressure on the trees during demolition or construction work, or post-completion demands for their removal; and
- c) to prepare an arboricultural impact assessment that evaluates the direct and indirect effects of the proposed design and where necessary recommends mitigation.

5.0 Site Survey

5.1 The site survey included within the Tree Plan at Appendix 4 contains:

- a) the location of all trees, shrub masses, hedges etc. of material consideration;
- b) other relevant features, such as buildings, other structures and boundary features;
- c) the approximate location of trees on land adjacent to the development site that might influence the site or might be important as part of the local landscape character.

6.0 Tree Survey

6.1 The tree survey and tree quality assessment was carried out in April 2015.

6.2 The tree survey, at Appendix 1, includes the trees or hedges on the proposed development site and trees or hedges immediately adjacent to the proposed development site that could influence the development or might be important as part of the local landscape character with a stem diameter of 150mm or greater.

- 6.3 The quality and value of existing trees is allocated to one of four categories, namely A, B, C or U (Unsuitable for retention). The category allocated to each tree depends in part upon the information gathered in the tree survey and in part upon the 'cascade chart for tree quality assessment' contained within BS:5837. It is also in part, subjective.

The trees have been differentiated on the Tree Plan by the colour and shape of the symbol allocated to each category.

7.0 Tree Constraints and Considerations

The purpose of this section is to identify the constraints and considerations, both above and below ground, associated with retained trees in the context of proposed development.

7.1 to 7.10 inclusive set out the **general principles** of tree constraints and considerations associated with a proposed development site.

7.11 to 7.20 inclusive set out the tree constraints and considerations associated with **this specific site**.

General Principles

- 7.1 In order to avoid damage to the roots or rooting environment of retained trees, the Root Protection Area (RPA) is plotted around category A and B trees as necessary to illustrate potential constraints to the proposed development. This area should be left undisturbed. However, where construction is proposed within the RPA, technical solutions may be available to enable the successful retention of trees.
- 7.2 The current and estimated height (in 40 years time) of category A and B trees may be annotated on the Tree Plan where this would cause unreasonable obstruction of sunlight or daylight to the development. This is represented by a segment, with a radius from the centre of the stem, equal to the current or estimated height of the tree. It is drawn from due North West to due East indicating the shadow pattern through the main part of the day.

- 7.3 To maximize the probability of successful tree retention a realistic assessment of the probable impact of any proposed development on the trees and vice versa should take into account the characteristics and condition of retained trees, with due allowance and space permitted for their future growth and maintenance requirements.
- 7.4 The relationship of buildings to large trees can cause apprehension to occupiers or users of nearby buildings or spaces. Buildings and other structures should be sited allowing adequate room for retained trees, and with due allowance and space permitted for their future growth.
- 7.5 Buildings and open spaces should be designed with due consideration to the proximity of retained trees, especially in terms of the foliage, flowers, fruit and other debris associated with the normal functions of a healthy tree.
- 7.6 Tree preservation orders, conservation areas or other regulatory tree protection.
- 7.7 The access and working area required to enable the construction of the proposed development, including the effects of pruning on the amenity value of retained trees.
- 7.8 The protection of overhanging tree canopies where they could be damaged by construction.
- 7.9 The requirements of infrastructure including above and below ground services, visibility splays, refuse stores, lighting, signage, solar collectors, satellite dishes and CCTV sightlines.
- 7.10 The potential for new planting to mitigate proposed tree loss.

This Specific Site

- 7.11 The radius of the RPAs of all trees, shrub masses, hedges etc. identified within the tree survey are given in the right hand column of the survey at Appendix 1.
- 7.12 The RPAs of T3, T6 and T7 are annotated on the Tree Plan.
- 7.13 The estimated heights of all trees of material consideration on and adjacent to the proposed development site are given in the third column of the tree survey at Appendix 1. The obstruction of sunlight is represented by a segment equal to the estimated height of the tree through the main part of the day.
- 7.14 The shadow patterns of T1, T3 and T6 are annotated of the Tree Plan. The shadow patterns of T1, T3 and T6 will not cause unreasonable obstruction of direct sunlight to the proposed development.

- 7.15 The retained tree should not cause undue apprehension to occupiers or users of the proposed building or space.
- 7.16 Due consideration has been given to the proximity of the retained trees with allowance and space permitted for their future growth.
- 7.17 None of the trees on or immediately adjacent to the site are the subject of a Tree Preservation Order and the site does not lie within a designated Conservation Area.
- 7.18 Due consideration must be given to access and working area required to enable the construction of the proposed development, including the effects of pruning on the amenity value of retained trees.
- 7.19 No overhanging tree canopies should be damaged by the construction activity.
- 7.20 Due consideration must be given to requirements of infrastructure including above and below ground services, visibility splays, refuse stores, lighting, signage, solar collectors, satellite dishes and CCTV sightlines.

8.0 Arboricultural Impact Assessment

The purpose of this arboricultural impact assessment is to consider the direct and indirect effects of the proposed design.

Summary of Impact

- 8.1 I have assessed the impact of the proposed development on the trees, shrubs and woody vegetation (trees) of material consideration, present on and immediately adjacent to the site. All the trees that may be directly affected by the development are listed in Table 1 below.

Table 1 - Summary of trees that will or may be affected by the proposed development

	Category A Trees	Category B Trees	Category C Trees	Category U Trees
Trees to be retained	T1 & T7	H2, T4 & T6	T3 & T5	-
Trees to be removed	-	A section of H2	-	-
Retained trees that will or may need to be pruned to enable construction	-	T4	-	-
Retained trees that will or may be affected by encroachment within the RPA	T7	H2, T4, & T6	T3 & T5	-

Detail of Impact

- 8.2 Trees to be retained:

The proposed development will retain T1, H2, T3, T4, T5, T6 and T7 as identified within the tree survey and annotated on the tree plan.

- 8.3 Trees to be removed:

The proposed development requires the removal of a section of H2 to create a new access. H2 is a domestic hedge.

- 8.4 Retained trees that will or may need to be pruned to enable construction:

The proposed development will or may require T4 to be pruned.

- 8.5 Retained category A and category B trees that will or may be adversely affected by encroachment within the RPA:

The proposed development will or may encroach within the root protection areas of H2, T3, T4, T5, T6 and T7; please see 8.6.

- 8.6 Safeguarding retained trees:

It will be necessary, prior to commencement of any construction activity, to provide Havant Borough Council with an Arboricultural Method Statement, a Tree Protection Plan and a Schedule of Arboricultural Supervision in order to safeguard the retained trees.

9.0 Tree Management

Pre-development tree work

- 9.1 A schedule of tree works, including root pruning, is included within the Tree Survey and Tree Quality Assessment at Appendix 1. Tree works required to enable or facilitate the proposed development are noted within Appendix 1 in **bold orange** text. Additionally recommended tree works to manage the existing tree stock are noted in **bold blue** italic text.

- 9.2 All pre development tree works must be carried out in accordance with British Standard 3998:2010 Tree Works. Recommendations.

Post-development management for existing trees

- 9.3 In the absence of specific proposals the post development management of existing trees should follow the guidance contained within 'Managing trees for safety', written by the National Tree Safety Group and published by the Forestry Commission in 2011.
- 9.4 In general, trees should be inspected following severe weather conditions, typically:
- a) strong winds (especially of gale force 8 or greater), particularly from an atypical direction,
 - b) heavy rain reducing root adhesion due to soil saturation, and
 - c) heavy snowfall leading to branch failure.

10.0 Useful Contact Details

10.1 Useful contact details:

Nick Hellis	Arboricultural Consultant	01935 814 110
Jamie Gargett	Principal Arboriculturist Havant Borough Council	023 9244 6525
Richard Murray	Planning Consultant Murray Planning Associates	023 9229 0700

Signed: 

Dated: *12th June 2016*

Nicholas Hellis MA ArborA AIEMA

Appendix 1 - Tree Survey and Tree Quality Assessment

Tree Survey and Tree Quality Assessment

Tree No.	Species	Height (m)	Stem Diameter (mm)	Average Crown Spread NESW (m)	Existing Branches	Life Stage	Observations Recommendations Management	Contribution in years	Category	RPA radius (m)
T1	English Oak	15.0	790	7.5	1st:4.5 S Can'py:2.0	Middle	Previously reduced and reshaped	40+	A1/2	9.60
H2	Beech Hedge	2.5	-	-	-	Young	Maintained	40+	B2	1.50
T3	Common Walnut	15.0	300 370 370	N: 4.5 E: 4.5 S: 4.5 W: -	1st: 5.0S Can'py 3.0	Young	Triple stemmed. Asymmetrical crown; previously sub dominant to now removed lime tree. Recently and reduced and reshaped	40+	C1	7.20
T4	English Yew	8.0	between 200 and 300	N: 6.0 E: 8.0 S: 3.0 W: 4.0	1st: - Can'py 1.5	Young	Multi-stemmed. Recently reduced and reshaped	40+	B1/2	as per crown spread
T5	Culinary Pear	6.0	300	N: 2.0 E: 2.5 S: 3.5 W: 2.0	1st: 3.5 N Can'py -	Middle	Recently reduced and reshaped. Likely to cause direct damage to the adjacent wall in the near future	10+	C	3.60
T6	English Oak	15.0	#700	N: 9.0 E: 1.0 S: 9.0 W: 9.0	1st: 6.0 S Can'py 4.5	Middle	Off-site. Low vigour, crown dieback, generally in decline. Forms a cohesive crown with T7	20+	B1/2	8.40

agl: above ground level

#: estimated dimension

tree works required by proposed development are noted in **bold orange** type

T: Individual tree

H: Hedgerow or garden hedge

G: Cohesive group of trees

W: Woodland

Tree No.	Species	Height (m)	Stem Diameter (mm)	Average Crown Spread NESW (m)	Existing Branches	Life Stage	Observations Recommendations Management	Contribution in years	Category	RPA radius (m)
T7	English Oak	15.0	#800	N: 9.0 E: 9.0 S: 9.0 W: 3.0	1st: 4.0 Can'py 4.0	Middle	Off-site. Appears to be in good condition. Forms a cohesive crown with T6	40+	A1/2	9.60
T8	English Oak	9.0	640	-	-	-	Dead	-	-	-

agl: above ground level

#: estimated dimension

tree works required by proposed development are noted in **bold orange** type

T: Individual tree

H: Hedgerow or garden hedge

G: Cohesive group of trees

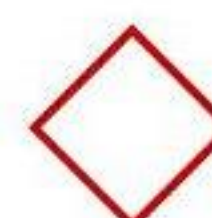
W: Woodland

Tree survey schedule:

- a) an sequential reference number for each tree or group of trees (also recorded on the Tree Plan);
- b) species (common names only);
- c) estimated height in metres;
- d) estimated stem diameter measured in millimetres typically at 1.5 metres above ground level;
- e) estimated branch spread in metres taken at the four cardinal points, as appropriate; (also recorded on the Tree Plan, as appropriate);
- f) existing height above ground level of canopy;
- g) life stage as follows,
 - i. young - a tree in the first third of average life expectancy for species.
 - ii. middle - a tree in the middle third of average life expectancy for species.
 - iii. mature - a tree in the last third of average life expectancy for species.
 - iv. over mature - a mature tree, which by reason of its physical or structural condition, has an estimated remaining contribution of less than 20 years
 - v. veteran - 'a tree which, because of its great age, size or condition is of exceptional value culturally, in the landscape or for wildlife' English Nature.
- h) observations, particularly of structural and/or physiological condition, as appropriate and pertinent to the matter being considered;
- i) management recommendations, as appropriate;
- j) estimated remaining contribution in years e.g. less than 10, 10+, 20+, 40+;
- k) a category is allocated to each tree or group of trees depending in part upon the information gathered in the tree survey, it depending in part upon the 'cascade chart for tree quality assessment' at Appendix 2 and it is in part, subjective; and
- l) rpa is based on the guidance given within BS: 5837.

Appendix 2 - Cascade Chart for Tree Quality Assessment

Cascade Chart for Tree Quality Assessment (April 2012)

Category and definition	Criteria (including subcategories where appropriate)			Identification on Plan
Trees unsuitable for retention				
Category U Trees in such a condition that they cannot realistically be retained as living trees in the context of the current land use for longer than 10 years	- Trees that have a serious, irremediable, structural defect, such that their early loss is expected due to collapse, including those that will become unviable after removal of other category U trees (e.g. where, for whatever reason, the loss of companion shelter cannot be mitigated by pruning) - Trees that are dead or are showing signs of significant, immediate, and irreversible overall decline - Trees infected with pathogens of significance to the health and/or safety of other trees nearby, or very low quality trees suppressing adjacent trees of better quality <i>NOTE: Category U trees can have existing or potential conservation value which it might be desirable to preserve</i>			 DARK RED
Trees to be considered for retention				
	1. Mainly arboricultural qualities	2. Mainly landscape qualities	3. Mainly cultural values, including conservation	Identification on plan
Category A Trees of high quality with an estimated remaining life expectancy of at least 40 years	Trees that are particularly good examples of their species, especially if rare or unusual; or those that are essential components of groups or formal or semi-formal arboricultural features (e.g. the dominant and/or principal trees within an avenue)	Trees, groups or woodlands of particular visual importance as arboricultural and/or landscape features	Trees, groups or woodlands of significant conservation, historical, commemorative or other value (e.g. veteran trees or wood-pasture)	 LIGHT GREEN
Category B Trees of moderate quality with an estimated remaining life expectancy of at least 20 years	Trees that might be included in category A, but are downgraded because of impaired condition (e.g. presence of significant though remediable defects, including unsympathetic past management and storm damage), such that they are unlikely to be suitable for retention for beyond 40 years; or trees lacking the special quality necessary to merit the category A designation	Trees present in numbers, usually growing as groups or woodlands, such that they attract a higher collective rating than they might as individuals; or trees occurring as collectives but situated so as to make little visual contribution to the wider locality	Trees with material conservation or other cultural value	 MID BLUE
Category C Trees of low quality with an estimated remaining life expectancy of at least 10 years, or young trees with a stem diameter below 150 mm	Unremarkable trees of very limited merit or such impaired condition that they do not qualify in higher categories	Trees present in groups or woodlands, but without this conferring on them significantly greater collective landscape value; and/or trees offering low or only temporary/transient landscape benefits	Trees with no material conservation or other cultural value	 GREY

Appendix 3 - Site Photographs



Photo 1 (above): Oak T1 and beech hedge H2

Photo 2: Walnut T3





Photo 3 (above): Yew T4

Photo 4: Off-site oak T6 and T7



Appendix 4 - Tree Constraints Plan



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Saltern's House, Hayling Island

Rev	Description
1	New fence, drainage connection and proposed wall gap shown

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Project: Salterns House, Hayling Island
Title: Tree Constraints Plan ref: TCPSPH
Date: June 2016

Based on a drawing provided by ESHA Architects

The purpose of this plan is to illustrate issues associated with the trees present on and immediately adjacent to the site.

The original of this drawing was produced in colour – a monochrome copy should not be relied upon.

Scale 1:500 at A3

END