



Tree Survey & Arboricultural Impact Assessment

DRAFT

Land at Grange Farm, Cannington TA5 2LD

October 2018



Report Name: Tree Survey and Arboricultural Impact Assessment

Our Reference: 18/03/29/NH

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Prepared for: Mrs Daphne Yorke

On the instructions of: Mrs Daphne Yorke

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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 73 new residential dwellings.

The site does not lie within a designated Conservation Area and there are no Tree Preservation Orders in effect either on or immediately to the site. Reference:

<http://webmaps.sedgemoor.gov.uk>

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 G1 to G7 inclusive and annotated on the Tree Plan at Appendix 4.

The proposed development does not require the removal or pruning of any trees.

The shadow patterns of G6 and G7 will cause modest but not unreasonable obstruction of direct sunlight to the proposed development.

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

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

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

The proposed dwellings, the associated infrastructure and hard surfacing will not encroach within the root protection areas of any of the retained trees. However, the activity required to construct the proposed development (vehicular movement, storage of materials, soft landscaping etc.) may encroach within said root protection areas if they are not properly safeguarded during the construction activity.

It will be necessary, prior to commencement of any construction activity, to provide Sedgemoor District 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

Table of Contents

| | | |
|--|--|-----|
| 1.0 | Instructions..... | 3 |
| 2.0 | Report Limitations | 3 |
| 3.0 | Introduction | 3 |
| 4.0 | Report Rationale | 4 |
| 5.0 | Site Survey | 4 |
| 6.0 | Tree Survey | 4 |
| 7.0 | Tree Constraints and Considerations..... | 5 |
| 8.0 | Arboricultural Impact Assessment..... | 8 |
| 9.0 | Tree Management | 9 |
| 10.0 | Useful Contact Details..... | 10 |
| Appendix 1 - Tree Survey and Tree Quality Assessment..... | | i |
| Appendix 2 - Cascade Chart for Tree Quality Assessment | | v |
| Appendix 3 - Tree Constraints Plan | | vii |

1.0 Instructions

- 1.1 I have been instructed in writing by Mrs Daphne Yorke to prepare a tree report 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 73 new residential dwellings.

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.
- 2.2 This report is neither intended nor suitable for any purpose other than the stated rationale.

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) 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 3.

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 were carried out on the morning of Tuesday 1st May 2018.

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 root protection areas 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 root protection areas of G3, T4, T5, G6 and G7 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 G3, T4, T5, G6 and G7 are annotated of the Tree Plan. The shadow patterns of G6 and G7 will cause modest but not unreasonable obstruction of direct sunlight to the proposed development.

- 7.15 The retained trees should not cause undue apprehension to occupiers or users of the proposed buildings or spaces.
- 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 The site does not lie within a designated Conservation Area and there are no Tree Preservation Orders in effect either on or immediately to the site. Reference: <http://webmaps.sedgemoor.gov.uk>
- 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.

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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 | G3, T4, T5 & G6 | G1, H2 & G7 | - | - |
| Trees to be removed | - | - | - | - |
| Retained trees that will or may need to be pruned to enable construction | - | - | - | - |
| Retained trees that will or may be affected by encroachment within the RPA | G3, T4, T5 & G6 | G1, H2 & G7 | - | - |

Detail of Impact

- 8.2 Trees to be retained:

The proposed development will retain G1, H2, G3, T4, T5, G6 and G7 as identified within the tree survey and annotated on the tree plan.

- 8.3 Trees to be removed:

None as identified within the tree survey and annotated on the tree plan.

The proposed development does require the removal of section of a young recently planted hedgerow adjacent to the existing roundabout.

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

None.

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

The proposed dwellings, the associated infrastructure and hard surfacing will not encroach within the root protection areas of any of the retained trees. However, the activity required to construct the proposed development (vehicular movement, storage of materials, soft landscaping etc.) may encroach within said root protection areas if they are not properly safeguarded during the construction activity.

- 8.6 Safeguarding retained trees:

It will be necessary, prior to commencement of any construction activity, to provide Sedgemoor District 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.
- 9.3 Specific wildlife species and their habitats are protected by law. Intentionally or recklessly damaging or destroying them, their nests, roosts or their habitats is a criminal offence. If works are proposed to a tree where protected species reside, or the tree forms a habitat for protected species, the appropriate advisory body should be consulted e.g. Natural England, Bat Conservation Trust etc.

Post-development management for existing trees

- 9.4 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.
- 9.5 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 |
| Janette Burton | Tree Officer Sedgemoor District Council | 0300 303 7800 |
| Andrew Preston | Associate Greenslade Taylor Hunt | 01823 334 466 |

Signed: *Nicholas Hellis*

Dated: *4th October 2018*

Nicholas Hellis MArborA

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) |
|-----------|-----------------|------------|--------------------|-------------------------------|-------------------|------------|--|-----------------------|----------|----------------|
| G1 | White poplar | up to 15.0 | up to 800 | 6.0 | 4.0 | Middle | None | 40+ | B 2 | 9.60 |
| H2 | Mainly thorn | up to 8.0 | up to 250 | 2.0 | Ground | Middle | Unmanaged hedgerow | 40+ | B 2 | 3.00 |
| G3 | 6 x English oak | up to 18.0 | up to 1200 | 14.0 | 2.1 | Middle | Off-site | 40+ | A 2/3 | 14.40 |
| T4 | English oak | 18.0 | 1200 | 12.0 | 2.4 | Veteran | Off-site. Multiple Ganoderma fruiting bodies present on the lower stem | 40+ | A 2/3 | 14.40 |
| T5 | English oak | 18.0 | 700 | 9.0 | 10.0 | Middle | Off-site | 40+ | A 1/2 | 8.40 |

agl: above ground level

#: estimated dimension

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

recommended tree works to manage the existing tree stock are noted in **bold blue** italic text

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) |
|---|--|------------|--------------------------|-------------------------------|-------------------|------------|---|-----------------------|----------|----------------------------|
| G6 | 3 x English oak 1 x Common ash 2 x Field maple | 18.0 | up to 650 | 9.0 | 2.4 | Middle | Extensive ivy | 40+ | A 2 | 7.80 |
| G7 | 1 x English oak 2 x Wych elm | 14.0 | 800 and 600 respectively | 8.0 | 2.1 | Middle | Good sized elm | 40+ | B 1/2 | 9.60 and 7.20 respectively |
| There are various other small/young or otherwise unremarkable trees and shrubs present both on and immediately adjacent to the site. These trees and shrubs are not considered a constraint to any proposed design or subsequent development. | | | | | | | | | | |





agl: above ground level #: estimated dimension
 tree works required by proposed development are noted in **bold orange** type
 recommended tree works to manage the existing tree stock are noted in *bold blue* italic text
T: Individual tree **H:** Hedgerow or garden hedge **G:** Cohesive group of trees **W:** Woodland

Tree survey schedule:

- a) a 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. ancient - '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 depends 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. The radius of the nominal circle as always rounded up to the nearest single stem diameter.

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 | <ul style="list-style-type: none">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 declineTrees 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 <p><i>NOTE: Category U trees can have existing or potential conservation value which it might be desirable to preserve</i></p> | | |  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 - Tree Constraints Plan



Tree Quality Assessment

| | |
|--|------------|
| | Category A |
| | Category B |
| | Category C |
| | Category U |

Indicates the direction and extent of direct sunlight through the main part of the day

Standard root protection area described as a circle

SCALE 1:1000

0 10 20 30 40 50m

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ARBORICULTURE & LANDSCAPE DESIGN

4 Bangers, Osborne, Sherborne, Dorset DT9 4JZ
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Project: land at Grange Farm, Cannington

Title: Tree Constraints Plan ref: TCPGF

Date: October 2018

Based on a drawing provided by GTH

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.

END