



BS5837 Tree Survey, Arboricultural Method Statement & Arboricultural Impact Assessment

For the property of:

**5 The Covert
Northwood
HA6 2UD**

Date: 05/10/2018

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Summary

This tree survey is requested following the refusal of planning application 32093/APP/2018/1601 proposing the construction of a two storey, 5 bed detached dwelling with habitable roof space and habitable basement, with associated parking and amenity space, involving demolition of the existing dwelling.

The following report is written provide an Arboricultural Tree Survey to the standard of BS 5837:2012 (Trees in relation to construction) and an Arboricultural Impact Assessment in order to deliver a method statement that will permit the development to take place whilst protecting existing trees and reducing the potential for any harm or disturbance as a result of the construction process to an absolute minimum where possible.

This information is supplied to enable the planning officer with the relevant information to allow for full consideration of the impact the proposed development will have on the amenity of the landscape and future impact..

Cherryfield Ecology has prepared this report for the named clients use only.

Tree reports are limited in shelf life, British Standard BS:5837 suggests reports be no more than 12 months old and therefore should the project not proceed within 12 months of this report an updated survey should be undertaken in order to check for changes that may have occurred on site. Information is believed to be accurate at the time of survey; recommendations are made without bias based on good practice guidelines within the industry. However, Arboricultural parameters can change over time.

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1. Introduction

- 1.1. This report is prepared by Andrew Digby (qualified to FdSc level 5 in Arboriculture with PTI accreditation) with over 10 years of experience in the arboricultural industry – including two years as National Tree Surveyor for Residential Barracks at the MOD and the last 8 years as a Tree Officer within Local Government.
- 1.2. Cherryfield Ecology has been instructed to inspect the trees on the development site and those that are neighbouring that may be impacted or influence the proposed demolition & construction works.
- 1.3. The following will be prepared;
 - A tree survey schedule detailing the relevant tree details and their condition category ratings
 - Evaluate the impact of the proposal on the trees and any works necessary prior, during and post development
 - Produce a tree protection plan and arboricultural method statement detailing how to protect and reduce the impact of the specified trees to an absolute minimum both during construction and the long term.
- 1.4. The purpose of this report is to enable the proposed development to take place whilst preventing damage to the existing tree(s) marked for retention in order that they survive and continue to contribute to the character of the area and can co-exist harmoniously with the new development.
- 1.5. A check for planning constraints reveals the property is not within a Conservation Area. The property does however sit entirely within a TPO (Tree Preservation Order) Area 400, this area TPO was served in 1986 and protects all trees of the following species within it: Oak, Hornbeam & Silver Birch.

2. Tree Survey

- 2.1 A full schedule of the trees surveyed is included in **Appendix 1**. All data gathered is in compliance with BS 5837: 2012.
- 2.2. The survey was carried out on Thursday 04th October 2018. Weather conditions were dry, overcast, calm.
- 2.3. All site observations were taken from ground level only and information recorded is based on my experience and qualifications as previously noted and in accordance to BS 5837: 2012 with notes made on the condition of the tree at that present time. It is important to stress that trees being a living organisms and susceptible to changes in weather conditions that a follow up survey could highlight different conditions.
- 2.4. Individual trees are numbered with the prefix T. Where necessary, groups of trees are numbered using the prefix G.

- 2.5. The Common and Latin name is used for species identification on the schedule, the latin name will be used in the written report.
- 2.6. Tree height was measured by approximation using industry standard technique.
- 2.7. Diameter was measured using an industry standard diameter tape which measures the circumference divided by π to provide the diameter in mm or cm as specified.
- 2.8. The Root Protection Area (RPA) is drawn as an average radius measuring 12x the diameter measure at 1.5m, where multi stemmed trees exist the british standard method of squaring all stems over 15cm and dividing by the square root provides a single figure.
- 2.9. Branch spread was recorded in meters in the four cardinal points or visually approximated where access was restricted.
- 2.10. Age class was selected from the following categories; Young, Early Mature, Semi-mature, Mature, Over Mature.
- 2.11. General comments are recorded on the trees physiological and structural condition.
- 2.12. Preliminary tree work recommendations are noted where necessary and separated into pre constructing, during construction and post construction.
- 2.13. Remaining contribution is estimated and categorised into the following; <10 years, 10+years, 20+ years, 30+ years, 40+ years & 50+ years.
- 2.14. Soil quality is described where a sample is taken or trial pit carried out.
- 2.15. A tree quality assessment is then made to categorise the tree according to BS 5837: 2012 guidance.

Tree quality assessment methodology: The British Standard recommends that trees with categories A-C (where A is the highest quality) are a material consideration in the development process. Such trees may then become a constraint for a planning proposal. Category U trees are those that will not be expected to exist for long enough to justify their consideration in the planning process (i.e. no more than 10 years). Tree categories are used with the number 1, 2, or 3 to signify whether the category was made based on arboricultural, landscape or cultural (including conservation) values respectively.

See **Appendix 2** for the BS:5837 Tree category classification description.

3. Observations

- 3.1 The site was accessed from the front of the property, there are no trees present on the front or sides. The rear garden consisted of sloping grass upwards towards the rear boundary where all of the trees at this property are located. This area is likely to be the remnants of a wooded area and as such is protected by an Area TPO.

The species mainly consists of Hornbeam which are mostly growing from previously coppiced stools, x4 of the Hornbeam closest to the demolition and proposed re-development were surveyed (T1-T4 respectively).

T5 & T6 are both semi-mature Oak trees located in the far rear corners of each side of the garden and are not a constraint to the proposed demolition and re-development.

The remaining Hornbeam were all coppice stools located towards the rear boundary between the two Oaks T1 & T2 and were included as a group, G1.

See Tree Schedule Appendix 1 for further details.

- 3.2 **Condition** – The trees vary in categorisation based on their condition, defects and remaining contribution.

No significant pre-construction works are necessary other than removal of deadwood which would be exempt from requiring statutory permission.

Some of the Hornbeam coppices are showing signs of dieback at the tips and may benefit from coppicing however this is not essential and is not required to permit the proposed construction to take place.

- 3.3 **Site Location** – The rear garden is North facing and therefore the trees do not shade the proposed development, it therefore unlikely to be increased pressure to prune or remove the trees protected by TPO.

The rear garden slopes considerably upwards towards the rear garden boundary.

- 3.4 **Soil** - The soil was not tested no site and no trial pits were carried out.

The UKSO map viewer suggests a **shallow** Clay to Silty medium to heavy soil.

4. Arboricultural Impact Assessment

- 4.1 The proposal does not necessitate the removal of any of the trees, all trees on site are suitable for retention during both demolition and construction phases.

- 4.2 There are no preliminary pruning works required to allow the demolition or construction phases to take place. Preliminary pruning recommendations only consists of re-coppicing of T1 for arboricultural reasons because it is one sided and will benefit the tree by allowing it to regenerate new growth.

Further preliminary works consist of removing deadwood which again is not essential.

- 4.3 The demolition process can be carried out using a pull in technique so that access to the rear garden is not required.

- 4.4 The construction can be carried out without the need to enter into the RPA of any of the existing trees and the front garden area can be used for storage of materials and site welfare.

- 4.5 There is no increased future pressures from the proposed development as there is sufficient distance remaining between existing trees and the proposed building and the use remains the same.
- 4.6 The RPA's do not encroach the location of the proposed outbuilding.
- 4.7 There are no foreseeable short term or long-term impact upon the existing trees.

5. Tree Protection and Arboricultural Method Statement (AMS)

- 5.1 An Arboricultural Method Statement (AMS) has been drawn up detailed in **Appendix 3** along with a TPP (tree protection plan) **Appendix 5** showing where protective fencing is to be installed. This forms part of the AMS, the AMS describes the working practice and protective measures taking place whilst working on site to ensure protection to the RPA's is maintained throughout demolition and construction phases.
- 5.2 It is essential that the AMS is observed and adhered to by the contractor.
- 5.3 Protective fencing in accordance with **Appendix 5** to be used secured in place and maintained in position prior to demolition and through the construction phase until the construction is completed. The protected area shall be referred to as the CEZ (construction exclusion zone).
- 5.4 The following actions shall be prohibited in the CEZ:
- Level changes (or removal of top soil)
 - Regular pedestrian access unless suitable ground protection applied
 - Storage of construction materials, chemicals fuels and other contaminants
 - Siting of site huts, welfare units, toilets etc.
 - Construction activities including hard surfacing
- 5.5 Soft landscaping within root protection areas: Any new soft landscaping within the root protection areas of retained trees shall occur as the final phase of development. The final specification for soft landscaping is to be confirmed but may include turfing and tree/shrub planting within root protection areas.

6. Conclusion

- 6.1 I conclude that subject to adherence for the methods and policies set out within the AMS & TPP there will be no detrimental impact upon the existing trees and there is no reason to believe that the safe useful life expectancy of any of the trees for retention will be affected by the proposed construction.

7. Appendices

1) Tree Survey Schedule

2) BS 5837 Tree Category Classification

3) AMS

4) Tree protection plan showing canopy, RPA and protective fencing locations

5) Tree Protective Fencing Specification

BS5837 Survey Data



Ref.	Species	Measurements	Physiological and structural condition	Preliminary Management Recommendations	Rem. Contrib.	Category
G001	Hornbeam (Carpinus betulus)	Height (m): 9 35 stems, avg.(mm): 200 Crown Clearance (m): 2 Lowest Branch (m): 2 Life Stage: Semi Mature	Group of Hornbeam re-grown from coppiced stools ranging from 10-30 years old.	Pre construction: No action required. During construction: Protect trees with protective barriers - as shown on plans. Post construction: No action required.	30+ Years	B2
		Other Reference: Distance1: Distance2: Custom Number 3: Physiological Cond: Good Structural Cond: Fair Bat Habitat: None	Additional Comments: This tree does not form a constraint to the redevelopment of the site.			RPA Area: 183.3 sq m.
T001	Hornbeam (Carpinus betulus)	Height (m): 9 6 stems, avg.(mm): 300 Branch Spread(m): 2(N), 8(S), 1(E), 3(W) Crown Clearance (m): 0 Lowest Branch (m): 0 Life Stage: Semi Mature	Multistemmed Hornbeam from previously coppiced tree. Sucker growth on all stems from base up trunk. Supressed one sided crown growing towards South side.	Pre construction: Re-coppice at 0.5m to regenerate new growth. During construction: Protect trees with protective barriers - as shown on plans. Post construction: No action required.	30+ Years	C2
		Other Reference: Distance1: Distance2: Custom Number 3: Physiological Cond: Fair Structural Cond: Fair Bat Habitat: None	Additional Comments: This tree does not form a constraint to the redevelopment of the site.			RPA Radius: 8.8m. Area: 243 sq m.

Ref.	Species	Measurements	Physiological and structural condition	Preliminary Management Recommendations	Rem. Contrib.	Category
T002	Hornbeam (Carpinus betulus)	Height (m): 13 5 stems, avg.(mm): 300 Branch Spread(m): 1.5(N), 6(S), 2(E), 1(W) Crown Clearance (m): 3 Lowest Branch (m): 3(NE) Life Stage: Semi Mature	Multistemmed Hornbeam from previously coppiced tree. Sucker growth on all stems from base up trunk. Supressed one sided crown growing towards South side. Rope attached to stem at 3m. Minor deadwood <200mm diameter and crown dieback of x1 stem.	Pre construction: Remove deadwood. During construction: Protect trees with protective barriers - as shown on plans. Post construction: No action required.	30+ Years	C2
		Other Reference: Distance1: Distance2: Custom Number 3: Physiological Cond: Fair Structural Cond: Fair Bat Habitat: None	Additional Comments: This tree does not form a constraint to the redevelopment of the site.			RPA Radius: 8.1m. Area: 206 sq m.
T003	Hornbeam (Carpinus betulus)	Height (m): 11 3 stems, avg.(mm): 200 Branch Spread(m): 1.5(N), 1.5(S), 2(E), 1(W) Crown Clearance (m): 2.5 Lowest Branch (m): 2.5(S) Life Stage: Semi Mature	Multistemmed Hornbeam from previously coppiced tree. Bark wound columns on all x3 stems from approx 1m up to 4m on North side, old wound well occluded, no further decay. Roped attached to stem on NE side at 4m. Crown dieback of x1 stem.	Pre construction: Remove deadwood. During construction: Protect trees with protective barriers - as shown on plans. Post construction: Re-coppice to encourage new growth.	30+ Years	C2
		Other Reference: Distance1: Distance2: Custom Number 3: Physiological Cond: Fair Structural Cond: Fair Bat Habitat: None	Additional Comments: This tree does not form a constraint to the redevelopment of the site.			RPA Radius: 4.2m. Area: 55 sq m.
T004	Hornbeam (Carpinus betulus)	Height (m): 13 Stem Diam (mm): 300 Branch Spread(m): 2(N), 4(S), 4.5(E), 3(W) Crown Clearance (m): 9 Lowest Branch (m): 6(S) Life Stage: Semi Mature	Shallow roots with some bark wounds from mower damage. Roped attached to stem at 4m Minor deadwood <200mm diam.	Pre construction: Remove deadwood. During construction: Protect trees with protective barriers - as shown on plans.	50+ Years	B2
		Other Reference: Distance1: Distance2: Custom Number 3: Physiological Cond: Fair Structural Cond: Fair Bat Habitat: None	Additional Comments: This tree does not form a constraint to the redevelopment of the site.			RPA Radius: 3.6m. Area: 41 sq m.

Ref.	Species	Measurements	Physiological and structural condition	Preliminary Management Recommendations	Rem. Contrib.	Category
T005	Oak (Quercus sp.)	Height (m): 14 Stem Diam (mm): 540 Branch Spread(m): 4(N), 7(S), 3(E), 6(W) Crown Clearance (m): 7 Lowest Branch (m): 7(SW) Life Stage: Semi Mature	Major deadwood on North side of crown >200mm diam. and minor deadwood within crown <200mm diam.	Pre construction: Remove deadwood. During construction: Protect trees with protective barriers - as shown on plans.	50+ Years	B2
		Other Reference: Distance1: Distance2: Custom Number 3: Physiological Cond: Good Structural Cond: Good Bat Habitat: None	Additional Comments: This tree does not form a constraint to the redevelopment of the site.			RPA Radius: 6.5m. Area: 133 sq m.
T006	Oak (Quercus sp.)	Height (m): 15 Stem Diam (mm): 620 Branch Spread(m): 8(N), 4(S), 5(E), 7(W) Crown Clearance (m): 4 Lowest Branch (m): 4(E) Life Stage: Semi Mature	Growing on garden boundary to neighbouring properties.	During construction: Protect trees with protective barriers - as shown on plans.	50+ Years	A2
		Other Reference: Distance1: Distance2: Custom Number 3: Physiological Cond: Good Structural Cond: Good Bat Habitat: None	Additional Comments: This tree does not form a constraint to the redevelopment of the site.			RPA Radius: 7.4m. Area: 172 sq m.

Appendix 2 - BS 5837 Tree Category Classification

The tree categories are shown on plan by colour-coding:

Category A (green colour-coded): Good examples of their species with an estimated life expectancy of at least 40 years.

Category B (blue colour-coded): Not suitable for an 'A' category due to impaired condition or a tree lacking special 'A' qualities: with an estimated life expectancy of at least 20 years.

Category C (grey colour-coded): Unremarkable trees of very limited merit or with a significant impaired condition not warranting an 'A' or 'B' category: with an estimated life expectancy of at least 10 years. See young trees below.

Category U (red colour-coded): 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 could be dead, have serious irremediable structural defects or infected with a serious pathogen.

Reasonably young trees below 150mm stem diameter would normally be given a C category (if they satisfy the retention quality criteria). However, as they are small they could be replaced/transplanted and as such they should not be regarded as a significant constraint on a development.

Category A-C trees are given three further sub-categories (1, 2, 3) which are intended to reflect arboricultural, landscape and cultural (nature conservation) values.

Advice from section 4 of BS:5837

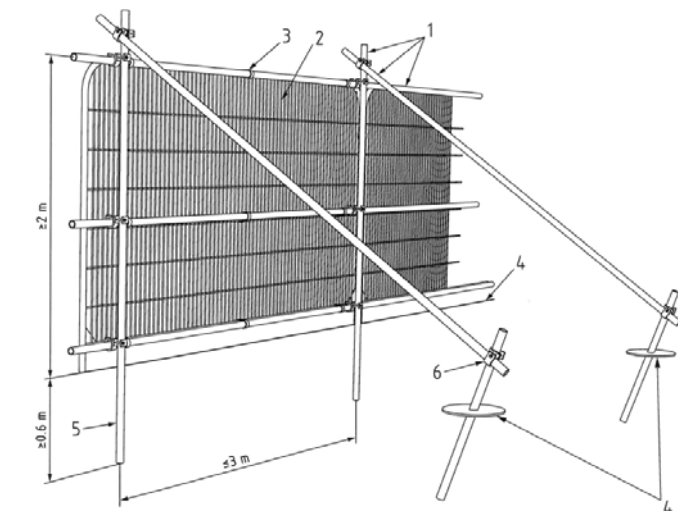
Appendix 3 – AMS

(To be read with Arboricultural Report)

1. Tree protection fencing to the specification in **Appendix 5** to be installed in accordance with the TPP (tree protection plan) **Appendix 4**.
2. Fencing is to be installed prior to commence of the demolition and is to remain throughout until completion of the development.
3. Fencing to be routinely inspected by site supervisor on daily basis to ensure it has not been moved or interrupted and that it still offers adequate protection to the specified area.
4. No storage of materials, fuels, chemicals or other contaminants, site huts or welfare units etc. to be sited within the RPA.
5. No excavation or changes in soil level within the tree protection area is necessary.

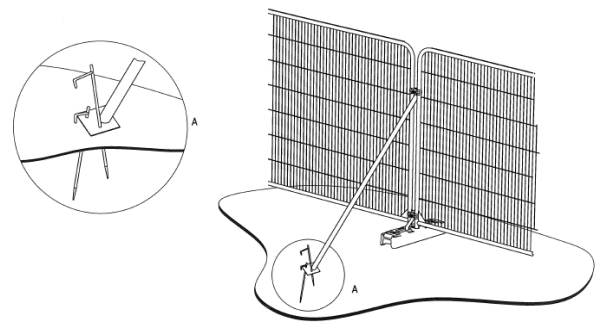
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Appendix 5 – Tree Protective Fencing Specification

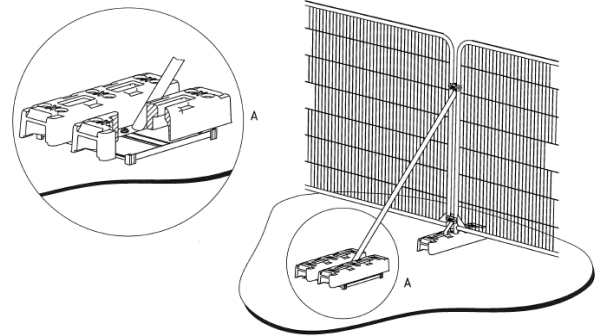


Key

- 1 Standard scaffold poles
- 2 Heavy gauge 2 m tall galvanized tube and welded mesh infill panels
- 3 Panels secured to uprights and cross-members with wire ties
- 4 Ground level
- 5 Uprights driven into the ground until secure (minimum depth 0.6 m)
- 6 Standard scaffold clamps



a) Stabilizer strut with base plate secured with ground pins



b) Stabilizer strut mounted on block tray

Affix Tree Protection Signage to all four sides.



