



ARBORICULTURAL SURVEY & TREE CONSTRAINTS REPORT

112 LONDON ROAD, PORTSMOUTH
for
Ropley Estates

NB. Information on legally protected, rare or vulnerable species may appear in ecological reports. In such cases it is recommended that appropriate caution be used when circulating copies.

March 2016
S6516

Betts

Bank House Martley Worcester WR6 6PB
United Kingdom

T +44 (0)1886 888445
F +44 (0)1886 888782
E nature@bettsecology.com

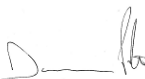
www.bettsecology.com

©Betts/Ropley Estates

CONTENTS

CONTENTS.....	1
REPORT CONTROL SHEET	1
Report Version Control	1
INTRODUCTION	2
Scope and objectives.....	2
Limitations	2
GENERAL SITE DESCRIPTION AND METHODS	4
RESULTS SUMMARY AND RECOMMENDATIONS	5
Constraints Appraisal	5
Recommendations	6
Table 1: Tree Survey Results Table	7
Key to Tree Survey Results Table	8
Bibliography of relevant British Standards	9
PLANS.....	10
CAPABILITY and QUALITY ASSURANCE	11

REPORT CONTROL SHEET

General Report Information	
Client	Ropley Estates Ltd
Report Title	Arboricultural Survey and Tree Constraints Plan
Location	112 London Rd, Cowplain, PO8 8HB
Date of site risk assessment	15 February 2016
Arboricultural Surveyor name & signature	 Dominic Poston MICFor, FArborA, CEnv, PDArb (RFS), BSc, HND Hort.
Date report issued	March 2016
Report approved by	 Natalie Loben

Report Version Control

Version	Date	Author	Description
1.0	2 March 2016	Dominic Poston	Document created
2.0	10 March 2016	Gemma Cone	Document completed

Whilst all due and reasonable care is taken in the preparation of reports, Betts accept no responsibility whatsoever for any consequences of the release of this report to third parties. Clients are reminded that all work carried out by Betts is subject to our Terms of Trading which may be viewed at any time on our web site at www.bettsecology.com or can be provided on request.

INTRODUCTION

Scope and objectives

This report was commissioned by Ropley Estates Ltd in respect of the proposed development at 112 London Road, Cowplain. The objectives of this arboricultural survey were:

1. A survey and schedule of all relevant trees on or adjacent to the site including an assessment of condition;
2. Appraisal of the above and below ground constraints imposed by existing trees on the potential development of the site;
3. Preliminary tree work recommendations on the basis of good arboricultural management.

Limitations

The purpose of this report is to provide an analysis of development constraints above and below ground which are imposed on the site by existing trees (including an assessment of likely future growth potential). Its primary purpose is as an aid for the scheme architects in developing a proposal which considers all existing constraints. This report considers all significant trees on the site or other area as designated within our instructions. Adjacent properties may also contain trees that pose a constraint on development and where necessary their details will be included.

Statutory tree protection. The potential effect of development on trees, whether statutorily protected (e.g. by tree preservation order or by their inclusion within a conservation area) or not, is a material consideration that is taken into account in dealing with planning applications. We have not checked whether trees on site are statutorily protected and you must carry out a statutory tree protection check if you intend to undertake any works prior to formal planning consent being issued.

Ecological Constraints. European legislation and a large body of UK legislation provide statutory protection to birds, bats and other species that inhabit or use trees. These can and often do impose significant constraints on the use of the land, tree operations and timing of site access in addition to any of the tree matters detailed in this report. These issues are beyond the scope of this report and have therefore not been considered. However, please be aware that the Baseline Audit Report provided by Betts is relevant.

Where trees were clad with ivy (*Hedera helix*) the inspection of such trees may be impeded. **For ecological reasons ivy (and other parasitic or epiphytic plants) should not be removed** but small sections sometimes have to be carefully cleared to allow adequate arboricultural inspection.

Validity. The statements made in this report do not take account of the effects of extremes of climate, vandalism or accident, whether physical, chemical or fire. The

author and Betts generally cannot therefore accept any liability in connection with these factors, nor where prescribed work is not carried out in a correct and professional manner in accordance with current good practice. The authority of this report ceases at any stated time limit within it, or if none stated after two years from the date of the survey or when any site conditions change, or pruning or other works unspecified in the report are carried out to, or affecting, the subject tree(s), whichever is the sooner.

Betts are a scientific practice. This report has been prepared for the sole use of the client. Any information relating to legal matters in this report is provided in good faith but does not purport in any way to give any advice on or interpretation of the law whatsoever. Professional legal advice should always be sought.

GENERAL SITE DESCRIPTION AND METHODS

The site, located at Ordnance Survey Grid Reference SU694 117 was visited by Dominic Poston on 15 February 2016 and comprises a single detached residential property and garage with front and rear gardens.

Soil assessment. No soil assessment was carried out by Betts Ecology and it is advised to commission specialist soil investigations in order to profile soil properties and therefore influence the engineering and positioning of built structures within the site. In the absence of definitive data soil properties are assumed to be shrinkable and containing high proportion of fine material.

Tree survey. Each tree was surveyed and given a number corresponding to the tree constraints plan (TCP) found at Figure 1. For each group or individual information was collected as recommended at 4.4.2.5 of BS 5837. The survey was preliminary in nature and did not involve aerial or detailed inspection. These data are held within the tree schedule (Table 1 above).

Interpretation of data. BS5837 recommends that trees within categories A–C (where A is highest quality) are a material consideration in the development process. However, young trees with a stem diameter less than 150mm could be considered for relocation. Category U trees are those that will not be expected to exist for long enough to justify their consideration in the planning process. However, please again note (and see below) that trees disregarded or marked as of low arboricultural quality in this report may be of ecological value and must not be pruned, felled or otherwise injured or treated without prior ecological advice. The tree categories are illustrated on the plans with colour coding. Category A trees are green, category B are blue, category C are grey and category U are red.

Veteran and ancient trees. Where category U trees are notable for their biodiversity, heritage or landscape value, even though only for the short term, they may be upgraded provided there are no overriding safety issues that cannot be appropriately managed.

RESULTS SUMMARY AND RECOMMENDATIONS

Constraints Appraisal

Below ground constraints. Section 4.6 of BS5837 recommends that the trunk diameter measurement for each tree is used to calculate the root protection area (RPA), which can then be interpreted to identify the design constraints and, once a layout has been developed, the Construction Exclusion Zone (CEZ) to be protected by barriers (tree protection plan (TPP)). The Table below lists the surveyed trees and their RPA dimensions. Figure 1 in the Plans section below (the Tree Constraints Plan (TCP)) graphically shows the surveyed trees and their relevant RPA. RPAs may have been altered where it is deemed necessary due to predicted eccentric root morphology. Root morphology will be influenced by the ground conditions; roots will proliferate where soil conditions are favourable and less so where the ground conditions are poor. Buildings and metalled road with deep foundations may inhibit root growth into the area.

Above ground constraints. The second constraint is the amount of space required around a tree(s) in order for it to be successfully retained once development is finished and the pressures of human occupation come to bear. It has been estimated by taking account of the recommendations with Section 5 of BS 5837 (including an assessment of future growth potential). This area would not normally be suitable for occupied accommodation but un-occupied structures or hard surfacing may be feasible. This is represented by a separate polygon on Figure 1 in the Plans section below (the TCP).

Indirect damage. Damage by indirect action can occur in shrinkable soils such as clay when vegetation takes moisture from the ground, causing a significant volume change resulting in ground movement. Buildings and drainage need to be protected against the effects of subsidence and heave. Specialist soil assessment must be commissioned in order to influence layout development and the engineering design of built structures.

Subsidence. Occurs when water is withdrawn from the soil causing it to shrink.

Heave. Occurs when previously dehydrated soils take up water and swell. This can happen when vegetation is removed or roots severed.

Note. Advice from an arboriculturist on the zone of influence of existing vegetation along with guidance and specifications from a qualified engineer must be sought when considering the above constraints.

Recommendations

Concept and design. A qualified and competent arboriculturist should be retained as a member of the design team in order to advise on the potential effects on or by existing arboricultural features. The scheme architect should utilise the information contained above and shown in Figure 1 in the Plans section below to inform the development layout. However, incursion into these areas may be feasible provided arboricultural input is sought at the design stage and that adequate mitigation measures are provided for.

Arboricultural Impact Assessment. Following the development of a considered design layout an Arboricultural Impact Assessment (AIA) must be commissioned to support the full planning application.

Arboricultural Method Statement. A site-specific Arboricultural Method Statement (AMS) will need to be produced as part of the detailed design process, this document would be supported by the production of Tree Protection Plans illustrating tree protection measures and the trees that will require works to facilitate the proposals. The AMS will be appropriate to the proposals and might typically address some or all of the following:

- Tree works to facilitate the scheme, including removals and pruning operations;
- Removal of existing structures and hard surfacing;
- Installation of temporary ground protection;
- Excavations;
- Installation of new hard surfacing - materials, design constraints and implications for levels;
- Preparatory works for new landscaping;
- A schedule of specific events requiring input or arboricultural supervision.

Preliminary tree works. No trees are identified for removal on the basis of good arboricultural practice alone.

Trees and Wildlife. Consideration must be given to the timing of tree works in order to avoid any disturbance and impact on protected species including bats, birds and dormice. Where the presence of legally protected species is suspected, Natural England or the Betts Ecology team must be contacted for advice. Do not remove ivy, mistletoe, standing dead wood, snags or rot unless there is a clear and material safety risk or presence of a serious pathogen. (Ask for advice from a qualified silvicultural ecologist if in doubt.)

Table 1: Tree Survey Results Table

See below for key to this Table

Tree	Species	Height (m)	Stem diameter (mm)	No of stems	Branch spread N (m)	Branch spread E (m)	Branch spread S (m)	Branch spread W (m)	Clear crown (m)	Age Class	Observations	Recommendations	ULE (years)	Retention category
T1	Oak	10	520, 470, 300, 100	4	6.5	6.5	6.5	6.5	2	SM	None	None	40+	A1
T2	Yew	5	50, 120	2	1.5	2	1.5	2	0	Y	Tight forks with included bark	None	40+	C1
G3	Mixed broadleaf group	<8	-	-	-	-	-	-	0	SM	Forming boundary with highway and including ash and thorn	None	20+	C2
G4	Mixed broadleaf group	<8	-	-	-	-	-	-	0	SM	Forming boundary with neighbouring property and incorporating hazel and thorn.	None	20+	C2
G5	Scots Pine	<15	310	1	-	-	-	-	3	SM	Group of 5 scots pine on adjacent land.	None	20+	B2

Key to Tree Survey Results Table

		Age Class		Definition	Retention Category			
Stem Dia.	= Stem diameter (mm) at 1.5m above ground level	Y	Young	1st 1/3rd of life expectancy	Category (BS 5837)		Sub Category (BS 5837)	
C.C.	= Height of crown clearance above ground level	SM	Early Mature	2nd 1/3rd of life expectancy	A	High Quality & Value	1	Mainly arboricultural value
U.L.E.	= Useful Life Expectancy of the tree in years	M	Mature	Final 1/3rd of life expectancy	B	Moderate quality & value	2	Mainly landscape value
Stems	No of stems emanating below 1.5m above ground level	OM	Over mature	Beyond life expectancy & in natural decline	C	Low quality & value	3	Mainly cultural value
(Ref)	Number and type of feature (T – tree, H – hedge, G – group, W - woodland)	V	Veteran	Great age & poss. high conservation value	U	No quality & value - Remove		
NB:		Estimated ultimate height and crown spread achievable at maturity if conditions are ideal are given (in brackets) next to actual measured dimensions						

Bibliography of relevant British Standards

British Standards Institute (2014). *BS 8545 : 2014 Young Trees: From Nursery to Independence in the Landscape.* BSI Standards Ltd., London UK

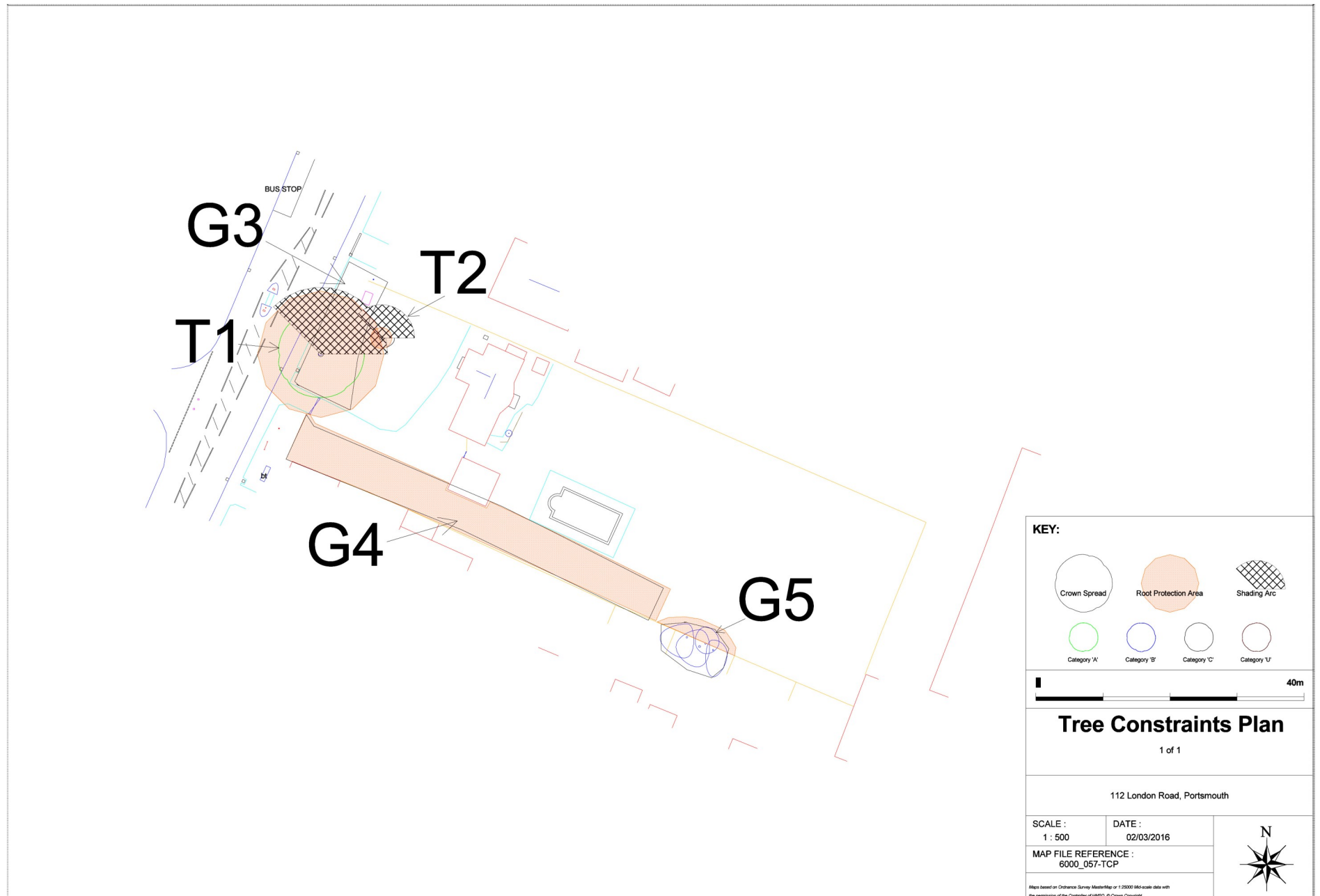
British Standards Institute (2013). *BS 42020 : 2013 Biodiversity. Code of practice for planning and development.* BSI Standards Ltd., London UK

British Standards Institute (2012). *BS 5837 : 2012 Trees in relation to design, demolition and construction – Recommendations.* BSI Standards Ltd., London UK

British Standards Institute (2010). *BS 3998 : 2010 Tree work - recommendations.* BSI Standards Ltd., London UK

Cautionary note. These are the principal arboricultural and ecological Standards we believe to be relevant to the context of the present text and our related site reports. Please be aware that the BSI constantly produces new Standards in many domains, some of which are updated editions and others are cross-related between disciplines. This can be confusing. Please always take professional legal advice before acting if you are unsure about the interpretation of statutes or formally adopted best practice.

Figure 1: Tree Constraints Plan



CAPABILITY and QUALITY ASSURANCE

Founded in 1985 to provide high quality professional services to meet an increasing market demand in applied environmental sciences, the Practice stems from the original Betts family business which was established in 1760 for the refining and recycling of high value industrial wastes and mineral ores. Betts thus offer an unusual blend of technological and practical expertise in a range of environmental disciplines, allied particularly to the biological conservation legislation and biodiversity policies of recent years. Contracts undertaken cover a wide spectrum of projects at local, national and international levels in the construction, extractive, agricultural, leisure, energy and general industrial sectors. Scientific staff belong to appropriate professional institutes by whose codes of practice they abide. Due consideration of the British Standard BS42020 (Biodiversity – Code of Practice for Planning and Development) is included in relevant work and applied where appropriate.

Dominic Poston - Arboriculturist

Dominic is a Chartered Arboriculturist and Environmentalist, holds a Bachelor of Science Degree in Horticulture, a Higher National Diploma in Landscape Management and the Royal Forestry Society's Professional Diploma in Arboriculture. He is a professional member of both the Arboricultural Association and the International Society for Arboriculture and is a registered consultant with the Institute of Chartered Foresters.

NB. Whilst all due and reasonable care is taken in the preparation of reports, Betts accept no responsibility whatsoever for any consequences of the release of this report to third parties. Clients are reminded that all work carried out by Betts is subject to our Terms of Trading which may be viewed at any time on our web site at www.bettsecology.com or can be provided on request. Please again be aware that site surveys inevitably miss species not apparent on the date of visit(s) by reason of seasonality, mobility, habits or chance. Results are indicative and given in good faith but they are not a guarantee of presence or absence of any particular taxa

Please note that this report is a baseline ecological site audit of factors and features that may be significant for regulatory compliance and biodiversity policies relating to change of use or other disturbance. Such reports may not, on their own, contain sufficient information for a planning application and may require further more detailed study to assure compliance.



Betts
Bank House
Martley
Worcester WR6 6PB
United Kingdom

T +44 (0)1886 888445
F +44 (0)1886 888782

E nature@bettsecology.com

South-East UK Office: Kent
Northern UK Office: Yorkshire

Research Office: Alpes Maritimes - France

More information is available at www.bettsecology.com

Professional service
Sustainable land management
Enhanced biodiversity
Better planning results

Betts Environment Betts Estates Betts Expert Services