



hugh.wilson@forestandtree.co.uk
07810 650084
01282 219311
www.forestandtree.co.uk

40 Church Street
Trawden
Lancashire
BB8 8RU

**Arboricultural Advice in accordance with
BS 5837:2012 Trees in relation to construction – Recommendations
Tree survey and Impact Assessment
20th December 2023**

Subject Property: 6 Petworth Close
Sharston
Wythenshawe
Manchester
M22 4YQ

Completed by: Hugh Wilson MSc BSc M.Arbor A.
Forest & Tree Consulting Ltd
40 Church Street
Trawden
Lancashire
BB8 8RU



Contents

1	INTRODUCTION.....	2
2	BS5837:2012 - THE ITERATIVE PROCESS.....	3
3	THE TREE SURVEY	5
	3.4 Tree Survey Schedule	8
5	SUMMARY & CONCLUSION	11
6	APPENDICES.....	12

1 INTRODUCTION

1.1 Brief: We are instructed to carry out an arboricultural survey of a proposed development site 6 Petworth Close, Wythenshawe, M22 4YQ. This is a semi-detached, brick-built property with driveway to the side and front of the property. A relatively small front garden is present beside the existing driveway. I will provide a tree survey and arboricultural impact assessment in accordance with BS5837:2012 *Trees in relation to construction – Recommendations* (hereafter BS5837).

1.2 Qualifications and experience: This report is based on my site observations and the provided information, and I have come to conclusions in the light of my experience. I have experience and qualifications in arboriculture and list the details in Appendix 2. Observations or comments on structural engineering and the law are made from an arboricultural perspective. Specialist professional advice should be sought to clarify such observations.

1.3 Documents and information provided: I was provided with copies of the following documents:

- Existing block plan (L197-07 existing block plan.pdf)
- Site Plan as Proposed (L197-05 proposed site plan rev A.pdf)

1.4 Scope of this report: This report includes an assessment of the trees in relation to potential development in order to:

1. Record principle attributes (species, height, crown spread and stem diameter).
2. Determine their quality and value.
3. Identify their remaining contribution and retention grading.
4. To identify the level of tree retention and removal and to illustrate on a tree retention and removal plan.
5. To appraise the impact of tree losses arising as a result of the proposals.
6. To appraise the impact of the proposals on the retention trees.

1.5 Purpose of the report: This report utilises the tree survey data to detail the arboricultural impact of the proposed layout.

1.6 Caveats: This report is only concerned with trees in relation to construction. It includes a detailed assessment based on the site visit and the documents provided, listed in 1.3 above. All my observations were from ground level without detailed investigations. Aerial tree inspection, invasive procedures and sub-soil investigations are outside the scope of the report. Should further assessment involving any of these be required it will be highlighted in the report.

2 BS5837:2012 - THE ITERATIVE PROCESS

2.1 Trees and the planning system – BS5837 Annex B

2.1.1 Under the UK planning system, local authorities have a statutory duty to consider the protection and planting of trees when granting planning permission for proposed development. The potential effect of development on trees, whether statutorily protected (e.g. by a 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. Where trees are statutorily protected, it is important to contact the local planning authority and follow the appropriate procedures before undertaking any works that might affect the protected trees.

2.1.2 The nature and level of detail of information required to enable a local planning authority to properly consider the implications and effects of development proposals varies between stages and in relation to what is proposed. Table B.1 provides advice to both developers and local authorities on an appropriate amount of information. The term “minimum detail” is intended to reflect information that local authorities are expected to seek, whilst the term “additional information” identifies further details that might reasonably be sought, especially where any construction is proposed within the Root Protection Area (RPA)¹.

2.1.3 Table B.1 Delivery of tree-related information into the planning system

Stage of process	Minimum detail	Additional information
Pre-application	Tree Survey	Tree retention/removal plan (draft)
Planning application	Tree survey (in the absence of pre-application discussions) Tree retention/removal plan (finalised) Retained trees and RPAs shown on proposed layout Strategic hard and soft landscape design, including species and location of new tree planting Arboricultural impact assessment	Existing and proposed finished levels Tree protection plan Arboricultural method statement – heads of terms Details for all special engineering within the RPA and other relevant construction details
Reserved matters/planning conditions	Alignment of utility apparatus (including drainage), where outside the RPA or where installed using a trenchless method Dimensioned tree protection plan Arboricultural method statement – detailed Schedule of works to retained trees, e.g. access facilitation pruning Detailed hard and soft landscape design	Arboricultural site monitoring schedule Tree and landscape management plan Post-construction remedial works Landscape maintenance schedule

¹ Root Protection Area is a layout design tool indicating the minimum area around a tree deemed to contain sufficient roots and rooting volume to maintain the tree’s viability, and where the protection of the roots and soil structure is treated as a priority.



- 2.1.4 In support of the application the following documents have been prepared:
- a. Tree survey compliant with BS 5837
 - b. Arboricultural Impact Assessment

3 THE TREE SURVEY

3.1 Tree survey methodology

3.1.1 A tree survey was carried out compliant with BS5837. The collected data is included below and the pertinent information is shown graphically on the Tree Constraints Plan (Appendix 1).

3.1.2 Trees are categorised in accordance with the cascade chart in Table 1 of BS5837:2012. The purpose of the categorisation process is to differentiate the quality and value of the existing tree stock so that informed decisions can be made on the retention or removal of trees.

3.1.3 The tree categories are summarised thus:

Category U: Trees unsuitable for retention that will be lost within the short term for reasons of physiology or structural integrity.

Category A: Trees of particularly high quality in arboricultural, landscape or cultural/conservation terms

Category B: Moderate quality trees downgraded from the high category because of significant defects, groups with a collective value through numbers rather than individual tree quality or trees with identifiable cultural or conservation values.

Category C: Trees with low value in arboricultural, landscape or cultural/conservation terms. Also includes young trees with a stem diameter of less than 150mm.

For trees in categories A – C subcategories 1, 2 & 3 are given to reflect arboricultural, landscape and cultural values respectively.

3.2 Findings of the survey

3.2.1 In the course of the tree survey we identified 1 individual tree. Of these it was found that they fell into the following quality and value grades:

QV Category	Description	No. of trees	%
U	Trees lost in the short term (<10 years)	0	0
A	Trees of particularly high quality	0	0
B	Trees of moderate quality	1	100
C	Trees of low quality	0	0
		1	100

3.3 Tree Survey Schedule Explanatory Notes

- **ID no.:** Trees are recorded using a site-specific unique identification number. This identification number is used for all references throughout the report and associated plans
- **Species:** The species identification is based on visual observations and the common English name of what the tree appeared to be is listed. In some instances, it may be difficult to quickly and accurately identify a particular tree without further detailed investigations. Where there is some doubt of the precise species of tree, it is indicated with a '?' after the name in order to avoid delay in the production of the report. The species listed for groups and hedges represent the main component and there may be other minor species not listed.
- **Estimated dimensions:** Estimated dimensions are *italicised*.
- **Height:** The height of the tree in metres.
- **Stem diameter(s):** This is measured at 1.5m above ground level and recorded in millimetres. Trees with low crowns are measured just above the root flare. For trees with multiple stems see 3.2.2 in main text. For groups the stem diameter for 80 percentile member is recorded
- **NSWE:** The branch spread is measured in metres at the four cardinal points of the compass to derive an accurate representation of the crown.
- **Ht 1st branch:** Height above ground in metres of attachment point of first significant branch (cardinal point may be given indicating direction of lowest branch).
- **Crown Clearance:** Height of the crown above ground level at the lowest point.
- **Life Stage:** Assessed as Young, Semi-Mature, Early Mature, Mature, Over Mature and Veteran.
- **Phys. condition:** An assessment of the physiological condition (i.e. health/vitality) status of the tree summarised into:
 - Good: Generally in healthy condition
 - Fair: Condition satisfactory though below mean species performance
 - Poor: Tree in decline
 - Dead: Self-explanatory
- **Structural condition & Notes:** Notes on the structural integrity of the tree based on visual tree assessment, including damage, decay fungi, pests, etc. as appropriate, plus other pertinent observations
- **Management recommendations:** Recommendations for retention or removal in light of the development proposals.
- **Ret. Span:** An estimate of the remaining contribution span that the tree or group of trees is expected to have, based on species, condition and context. The following longevity bands are used, categorised accordingly:
 - <10 Tree is dead, dying, has a severe structural defect, or will become exposed following inevitable loss of companion shelter. Possibly requires sanitation felling
 - Unsuitable for retention



10+ Short-term longevity only: replacement planting generally appropriate

20+ Mid-term longevity

>40 Good longevity

- **QV Grade:** Quality & Value grade classification according to BS5837

U - Unsuitable for retention

A - High retention priority

B - Moderate retention priority

C - Low retention priority

+subcategories 1, 2 & 3 reflecting arboricultural, landscape and cultural values respectively.

- **Retention / removal colour code:**

Trees and groups to be retained

Trees and groups to be removed to facilitate development

Trees and groups to be removed for arboricultural reasons



3.4 Tree Survey Schedule

FTC Ref. No. (autoincrements)	Species	Ht. (m)	Crown Spread (m)				Ht. 1 st Br. (m)	Ht. Can. (m)	Stem Count	Stem Dia. (mm)					RPA Rad. (m)	RPA Area (m2)	Life Stage Y-SM-EM-M-OM	Phys. Condition G-F-P-D	Structural condition & Notes	Management recommendations	Ret. Span <10, 10+ 20+, >40	QV Grade U-A-B-C
			N	S	W	E				1 / mean	2	3	4	5								
1	Himalayan birch	10.4	3.2	3.5	3	4.2	1.6 - E	1.9	1	290					3.48	38	EM	F	Tree on similar age to house, likely planted when house built in 1990's. Upright stem becomes multiple leaders from 1.6-2.2m with tight forks where stems meet. Past "topping" of tree apparent at c.5.5-6m with vigorous regrowth above this point. Multiple stubs on lower stem where crown has been lifted. Very minor decay at pruning point on lower stem. Surface roots appear to reach edge of lawn area, but do not seem to extend onto paved/tarmac area with no cracks evident. No observed dieback or disease	Raise crown to 3m above proposed driveway by removing only fine twig material	20+	B1

4 ARBORICULTURAL IMPACT ASSESSMENT

4.1 Tree retention and removal

4.1.1 The proposal is construction of a two-storey extension built on the current driveway to the side of the house to extend the driveway at the front of the property to be in line with the existing bay window of the property. The existing site access from Avenue Road will be maintained as will the boundary features.

4.1.2 A single tree in present on the property towards the front roadside edge of the garden, it is of a similar age as the property which was built in the 1990's.

4.1.3 The proposed layout will entail the loss of zero trees.

4.2 Construction in Root Protection Areas

4.2.1 There is a single area of construction proposed within the RPA of the single tree on site. This is removal of the existing driveway paved edge and construction of the extended driveway.

4.2.2 This incursion is modest in size. BS 5837 recommends, in section 7.4, that new hard surfacing within RPA's be constructed using methods that minimize the impact on the affected tree(s) and cover no more than 20% of the open ground within the RPA. The most appropriate means of construction is a no-dig method using a load-bearing cellular confinement system. The levels on site are well suited to the use of a no-dig system and I do not envisage any issues with installation. The new surface will cover 6.84sqm of the total of 23.6sqm of open ground within the RPA of tree 1. At 29% this is above recommended maximum of 20% recommended in BS 5837, but the no-dig construction methodology and back fill of a permeable material will minimise the change I surface cover.

4.2.3 Further to the above considerations new structures and hard-surfaces over RPAs change the availability of moisture and oxygen to the tree roots. In consideration of this BS5837 limits the percentage of new structures or hard surfaces covering currently open ground within an RPA to 20%. Below is a table detailing the impact of the affected trees:

Tree no.	RPA (m ²)	Open ground in RPA (m ²)	RPA under proposed build (m ²)	Percentage
1	38	23.6	6.84	29



4.3 Pruning works to facilitate development.

4.3.1 A very minor crown lift will be required where the Eastern most limbs of the crown have the very finest twig material within 3m of the proposed driveway. A crown raise to 3m will no remove any significant material that would detrimentally affect the health of the tree in the short-long term.

4.4 Proximity of trees and structures.

4.4.1 The tree is to the Southeast of the main building and proposed extension at 6 Petworth Close, shading by the tree on the site will be minimal at worst and likely to be imperceivable.

4.4.2 The height and orientation of the gutters of the proposed extension, as well as its distance from the tree, make issues related to leaf fall and debris a unimportant issue

4.5 Tree protection during construction.

4.3.1 Trees can be irreparably and unwittingly damaged in a few minutes during construction. Accordingly a tree protection scheme should be prepared in accordance with the guidance of BS 5837 for the proposal to ensure the successful long-term retention of the tree on the adjacent property (Appendix 2).

4.4 Arboricultural Method Statement

4.4.1 The increased hard standing and fencing installation have the potential to cause harm to retention trees if constructed using conventional techniques. Therefore the methods for installing hard surfaces and for excavations in RPAs recommended in BS5837 should be followed. Suggested methodologies should be provided as part of an arboricultural method statement provided alongside a tree protection plan.

5 SUMMARY & CONCLUSION

5.1 The proposal includes the loss of zero trees

5.2 Some modest construction and remedial work is proposed within the root protection area of retention trees. This work is not particularly complex and within the recommendations of BS5837. An arboricultural method statement should be prepared to ensure the proposals are arboriculturally acceptable. As the works are minimal in impact and not particularly complex I suggest the presentation of the arboricultural method statement can reasonably be conditioned.

5.3 A tree protection plan should be prepared to ensure the successful prevention of harm to the retention trees during construction and therefore the long-term retention.

5.4 Given the above I am satisfied the proposal is workable and arboriculturally acceptable.

Hugh Wilson

Hugh Wilson MSc BSc M.Arbor A.
Director



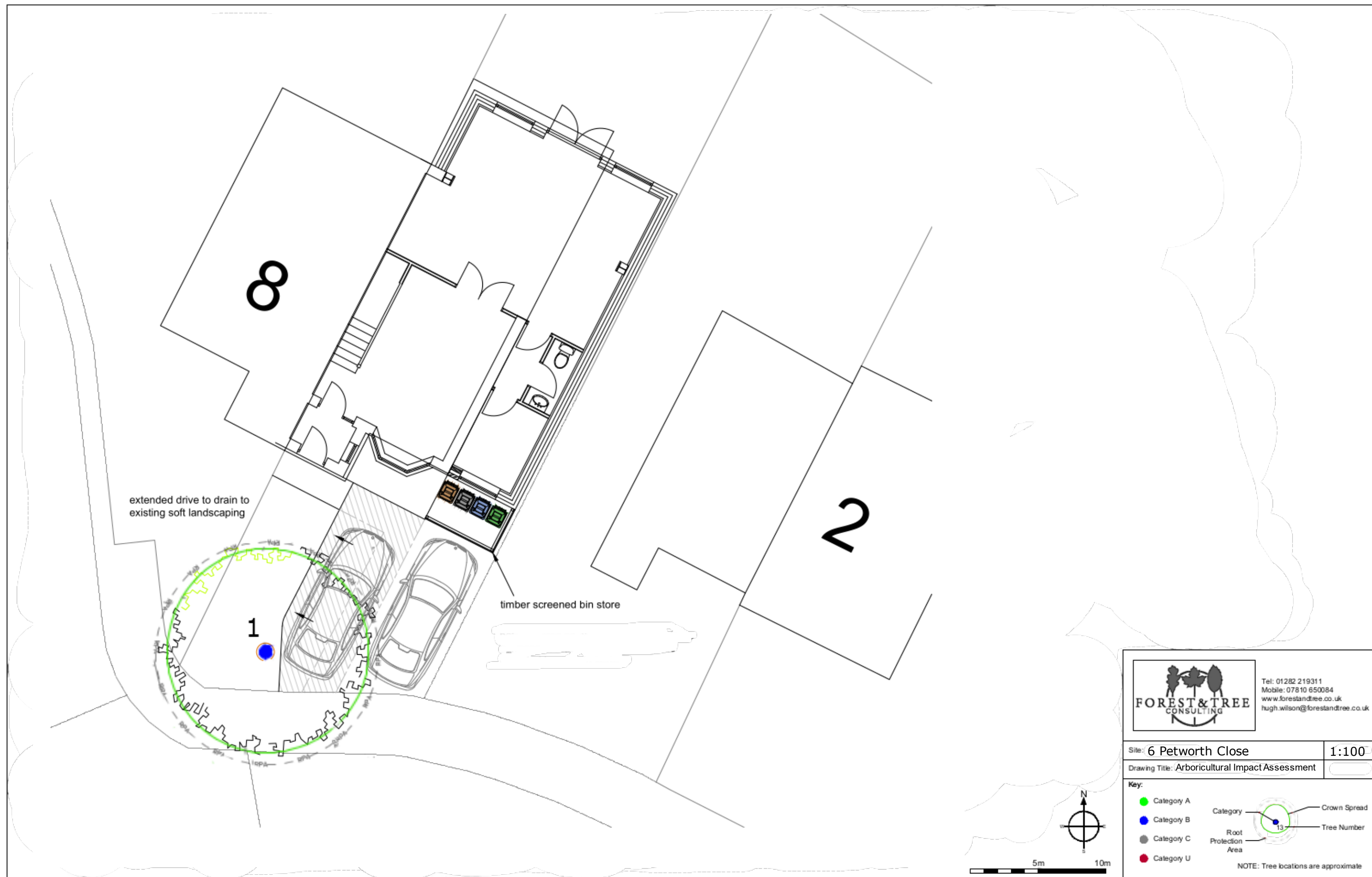


6 APPENDICES

APPENDIX 1

ARBORICULTURAL IMPACT ASSESSMENT

Note this drawing is scaled for printing at A3 and is intended to be read in colour



Tel: 01282 219311
Mobile: 07810 650084
www.forestandtree.co.uk
hugh.wilson@forestandtree.co.uk

Site: 6 Petworth Close 1:100

Drawing Title: Arboricultural Impact Assessment

Key:

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

Category

Root Protection Area

Crown Spread

Tree Number

13

NOTE: Tree locations are approximate



APPENDIX 2

Brief qualifications and experience of Hugh Wilson

1. Qualifications

- a. MSc Forest Ecology and Management – University of Edinburgh
- b. BSc honours (2:1) Environmental Science – University of Nottingham
- c. Professional Tree Inspection

2. Practical experience

- a. Southwick Arboriculture Ltd: Tree care operative
- b. Marishal Thompson Ltd: Tree Surveyor/Assistant Arboriculturalist
- c. ADAS Ltd: Vegetation Management/Wayleave Surveyor
- d. Forest & Tree Consulting Ltd: Director/Principal Consultant

3. Continuing Professional development:

Forest & Tree Consulting Ltd is committed to continuing professional development to ensure all staff continue to learn and develop throughout their careers so they keep their skills and knowledge up to date and are able to work safely, legally and effectively.

Sample of the seminars and conferences attended:

- Practitioners guide to Visual Tree Assessment
- Arboriculture Association conference 'New Horizons in Arboriculture'
- Visual Tree Assessment, Tree Safety Diagnosis and Failure Analysis seminar by Dr. Claus Mattheck
- The Institute of Chartered Foresters' conference Trees, People & the Built Environment

4. Membership of professional bodies:

- a. Professional member of the Arboricultural Association
- b. Associate member of the Institute of Chartered Foresters
- c. Member of the Royal Forestry Society
- d. Member of the Royal Scottish Forestry Society