



ARBORICULTURAL REPORT

With Impact Assessment
To BS 5837:2012 at:

Martin Croft Garages
Silkstone
Barnsley
South Yorkshire
S75 4JS

Prepared for:
White Agus Partnership
34 Victoria Road
Barnsley
South Yorkshire
S70 2BU

Date: *September 2019*

Reference: *AWA2810*



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1. Introduction

1.1 Instructions and Brief

- 1.1.1 We have been instructed by Robert Agus of the White Agus Partnership to visit the site and prepare our findings in a report.
- 1.1.2 The report is required in accordance with *BS 5837:2012 Trees in relation to design, demolition and construction – Recommendations*, to provide detailed, independent, arboricultural advice on the trees present, in the context of potential development.

1.2 Survey Details

- 1.2.1 The survey took place during August 2019.
- 1.2.2 The trees were surveyed visually from the ground using “Visual Tree Assessment” techniques and in accordance with the guiding principles of British Standard 5837:2012.
- 1.2.3 Any additional off-site trees that could impact a new development design have been included in the tree survey parameters.
- 1.2.4 We have been provided with a topographical survey with tree positions plotted. Where surveyed trees were not included on the topographical survey the tree positions were plotted using enhanced GPS technology (1-2m accuracy) and laser distance measurer.
- 1.2.5 This report has been prepared by Mr Adam Winson Chartered Arboriculturist, MSc, BSc (Hons), MICFor, MArborA, Principle and Director of AWA Tree Consultants Ltd.
- 1.2.6 The tree survey data collection was carried out by Mr Dave Farmer FdSc (Arb), MArborA, PTI (Lantra). Arboriculturist at AWA Tree Consultants.
- 1.2.7 Full qualifications and experience are included within **Appendix 1**. Explanatory details regarding the survey methodology are included within **Appendix 2**. A full explanation of the tree data can be found at **Appendix 3**. Full details of all the trees surveyed are found in **Appendix 4**. For tree locations please refer to the Tree Constraints Plan at **Appendix 5** and for the Tree Impacts Plan refer to **Appendix 6**.

2. The Site

2.1 Location & Description

- 2.1.1 The site is located in Silkstone, a village and civil parish in the Metropolitan Borough of Barnsley in South Yorkshire, approximately 3.5 miles to the west of Barnsley town centre.
- 2.1.2 The site currently consists of several disused garages and an access driveway. The boundaries are formed by hedgerows and groups of trees. The site is surrounded to the east, south and west by residential properties and there are allotments to the north.
- 2.1.3 The approximate survey area has been highlighted in the (2007) image below:



3. The Trees

3.1 Legal

- 3.1.1 An online check has been carried out on 16/08/2019 to ascertain whether any trees within the site are protected by virtue of a Tree Preservation Order (TPO) or are within a Conservation Area. This check revealed that no trees at the site are currently protected.
- 3.1.2 Due to the large potential penalties for illegally carrying out work to protected trees, before authorising any tree works a further check should be made with the Local Planning Authority to confirm if the trees are covered by a TPO or are within a Conservation Area. If either applies, then statutory permission is required before any works can take place.
- 3.1.3 When appointing a tree surgeon, only properly qualified and experienced companies should be used, who have adequate Public Liability and Employer's Liability Insurance. All tree work should be carried out according to British Standard 3998:2010 *Tree Work - Recommendations*.

3.2 Tree Survey Results

- 3.2.1 The tree survey revealed 13 items of woody vegetation, comprised of 9 individual trees and 4 groups of trees or shrub/hedge groups. Of the surveyed trees: 4 trees are retention category 'B'; and the remaining 9 trees and groups are retention category 'C' (explanatory details regarding the retention categories are included within Appendix 3).
- 3.2.2 The significant tree cover within the site consists primarily of trees and hedgerows close to the boundary lines. The hedgerows are generally along the east and south boundaries with a dense group of larger trees along the embankment to the west.
- 3.2.3 The central area of the site contains little of arboricultural significance, generally consisting of hard surfaced areas and the disused garages.
- 3.2.4 Species diversity at the site is fair. The hedgerows are comprised of Elder, Hawthorn, Holly or Privet and tree species include Ash, Hazel, Lime, Maple and Willow. Most of the trees are semi to early mature with only the occasional mature tree.
- 3.2.5 The most significant trees are located close to the western site boundary

beyond the top of the embankment (T7, T8, T9 and T12). These early mature Lime, Maple and Willow trees are visually prominent from within the site and from the residential properties to the west. Providing a good level of collective amenity value.

- 3.2.6 The remaining trees along the western boundary are generally of lower value, some having defects that are likely to limit their prospects in the longer term (Understory group G6, T10 & T11).
- 3.2.7 The hedgerow group along the southern boundary (G2) has been heavily pruned leaving a sparse collection of poorly established Hawthorns. Currently they are of very low value, but if brought back into management they have the potential to provide screening between the site and the footpath to the south.
- 3.2.8 The remaining trees within the site are of low value and should not pose any significant constraint on the development potential of the site. However, they add further screening to the site boundaries and could be retained within a future development provided they are suitable within the development proposals.
- 3.2.9 Some trees were covered in dense ivy or were inaccessible (as detailed in appendix 4) in such cases measurements were estimated and the condition values are indicative only.
- 3.2.10 The tree Root Protection Area (RPA) detailed on the Tree Constraints Plan at Appendix 5, has been used as a layout design tool, to inform on the area around a tree where the protection of the roots and soil structure is treated as a priority.
- 3.2.11 Some lower value tree, hedge and shrub groups do not have RPAs detailed on tree plans. The detailed extent and spread of the low value groups, in conjunction with the tree schedule, is sufficient to assess the associated potential constraints.
- 3.2.12 The RPA for each tree has been plotted as a polygon centred on the base of the stem. Due to the presence of roads, structures, topography (and past tree management) the RPA is likely to be a simplified representation of the tree roots actual morphology and disposition. However, detailed modifications to the shape of the RPA would largely be based on conjecture and so have been avoided.

4. Arboricultural Impact Assessment

4.1 Proposed New Development

- 4.1.1 It is proposed to build new residential dwellings with associated landscaping and facilities.
- 4.1.2 The development proposals have been provided by my client and inform this arboricultural impact assessment and the Tree Impacts Plan at Appendix 6.

4.2 Direct Impacts

- 4.2.1 From assessing the new development proposals, no trees will require removal. However, it is advised to heavily prune back the low value trees/shrubs T5 Hazel and T13 Holly.
- 4.2.2 As the surveyed trees are to be retained, the development will have no significant negative arboricultural impact.

4.3 Indirect Impacts

- 4.3.1 The tree Root Protection Area (RPA) detailed on the Tree Constraints Plan at Appendix 5, has been used as a layout design tool, to inform on the area around a tree where the protection of the roots and soil structure is treated as a priority. As such, no significant negative indirect impacts have been identified.
- 4.3.2 Potentially damaging activities are proposed in the vicinity of retained trees. The new development encroaches close to and into the edge of the RPA of T5 and T13. Construction within the RPA can have negative impacts on tree roots. However, the encroachment is very minor, and the detailed RPA for these trees is likely to be a slightly exaggerated representation of the trees actual rooting area. As such, it is unlikely that significant roots will be within these areas and the retained tree should remain largely unaffected by the works, provided care is taken during construction.
- 4.3.3 The design of the new development has considered the trees crown position in relation to the dwellings. Some shade from trees may be beneficial. In particular, deciduous trees give shade in summer but allow access to sunlight in winter. However, the design proposals avoid excessive shading, and give adequate provision for future tree growth.

4.3.4 The buildability of the proposed development has been assessed in terms of access, adequate working space and provision for the storage of materials, including topsoil, in relation to the trees.

4.4 Suitable Mitigation

4.4.1 The development of the site provides an excellent opportunity to undertake new tree planting throughout the site as part of a soft landscaping scheme. As such, suitable new tree planting has the potential improve the sites tree cover.

4.5 Protection of the Retained Trees

4.5.1 The retained trees may require protection by fencing in accordance with BS 5837: 2012, during the development phase.

4.5.2 If required by the Local Planning Authority, an associated Arboricultural Method Statement, detailing protective fencing specifications and construction methods close to the retained trees can be provided.

4. Signature

I trust this report provides all the required information.

Signed



.....
Adam Winson, Chartered Arboriculturist, MSc, BSc (Hons), MICFor, AIEEM.

5th September 2019

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Appendices

Appendix 1: Authors Qualifications and Experience

Appendix 2: Survey Methodology and Limitations

Appendix 3: Explanation of Tree Descriptions

Appendix 4: Tree Data

Appendix 5: Tree Constraints Plan

Appendix 6: Tree Impacts Plan

Appendix 1: Authors Qualifications & Experience

Mr Adam Winson Chartered Arboriculturist, MSc, BSc (Hons), MICFor, MArborA, ACIEEM, QTRA Registered.

Adam is the company Director and Principle Consultant. He has a mix of the highest level academic qualifications and relevant work experience. He has worked within the tree care profession for over 20 years, and was awarded an MSc in Arboriculture and Urban Forestry, with distinction. Adam is a Chartered Arboriculturist and a Registered Consultant with the Institute of Chartered Foresters, a Professional Member of the Arboricultural Association and has original research published by the UK Forestry Commission. His work ranges from individual expert tree inspections to managing trees on major multimillion pound housing developments and infrastructure projects. His work often involves trees with preservation orders or litigation, and he has appeared as a tree expert, at planning appeal hearings up to the Crown Court.

Mr James Brown BSc (Hons) Arboriculture, MArborA. PTI (Lantra).

James has a BSc (Hons) in Arboriculture, attaining first class honours, as well as being awarded the Institute of Chartered Forester's Student award. He is a Professional Member of the Arboricultural Association and an Associate of the Institute of Chartered Foresters. James previously worked in Europe's largest tree nursery and has experience of Local Authority tree officer work. His main work consists of tree surveys for development projects and preparing Tree Protection Schemes to BS 5837:2012.

Mr Dave Farmer FdSc (Arb), MArborA, PTI (Lantra).

Dave has a Foundation Degree in Arboriculture (with Distinction) and is qualified in Professional Tree Inspection. He is a Professional Member of the Arboricultural Association and an Associate of the Institute of Chartered Foresters. Dave has many years of experience within the tree care profession, including lecturing in arboriculture. His work focuses on diagnosing potential tree risk problems, and recommending appropriate treatments and work programmes.

Dr Felicity Stout Ph.D, MA, BA (Hons), Cert Ed (Forestry), TechArborA. PTI (Lantra).

Felicity has worked in the tree care profession for the last 10 years. She has a Certificate in Higher Education in Forestry, with a focus on Urban Forestry. She has practical arboricultural contractor experience and is a qualified and experienced Social Forestry practitioner. Felicity has a PhD in History, with a particular interest in the history of woodland and tree management and has published in The Arboricultural Journal on this subject.

Mr Patrick Rowntree Cert Arb L3, TechArborA. PTI (Lantra).

Patrick is a trained arborist with 5 years of experience in both the private and commercial sectors and is a technician member of the Arboricultural Association. Having travelled the world, both working as an arborist and playing professional rugby, Patrick was awarded a Distinction in the Extended Diploma in Forestry & Arboriculture and is qualified in Professional Tree Inspection. Patrick now uses his work and education experience at AWA, focusing on accurate tree data collection for tree surveys for development projects and assisting the team in the preparation of tree reports and tree plans to BS 5837:2012.

Appendix 2: Survey Methodology and Limitations of Report

The survey was undertaken in accordance with British Standard 5837:2012 *Trees in relation to design, demolition and construction – Recommendations*. The trees were assessed objectively and without reference to any proposed site layout. The trees were surveyed from the ground using 'Visual Tree Assessment' (VTA) methodology. VTA is appropriate and is endorsed by industry guidance. It is used by arboriculturists to evaluate the structural integrity of a tree, relying on observation of trees biomechanical and physiological features. Measurements are obtained using a diameter tape, clinometer, laser distometer and loggers tape. Where this is not practical measurements are estimated. Tree groups have been identified in instances as defined in BS 5837:2012. Shrubs and insignificant trees may have been omitted from the survey.

This report represents a BS5837 tree survey and should not be accepted as a detailed tree safety inspection report; however, tree related hazards are recorded and commented upon where observed, yet no guarantee can be given as to the absolute safety or otherwise of any individual tree. All recommended tree work must be to BS 3998:2010 - *'Tree Work: Recommendations'*.

The findings and recommendations contained within this report are valid for a period of twelve months from the date of survey. The author shall not be responsible for events which happen after this time due to factors which were not apparent at the time, and the acceptance of this report constitutes an agreement with these guidelines and terms.

Appendix 3: Explanation of Tree Descriptions

HEIGHT of the tree is measured from the stem base in metres. Where the ground has a significant slope the higher ground is selected.

CROWN HEIGHT is an indication of the average height at which the crown begins and includes information of the first significant branch and direction of growth.

STEM DIAMETER is measured at 1.5 metres above (higher) ground level. Where the tree is multi-stemmed at this point; the diameter is measured close to ground level or else a combined stem diameter is calculated.

CROWN SPREAD is measured from the centre of the stem base to the tips of the branches in all four cardinal points.

AGE CLASS of the tree is described as young, semi-mature, early-mature, mature, or over-mature.

PHYSIOLOGICAL CONDITION is classed as good, fair, poor, or dead. This is an indication of the health of the tree and takes into account vigour, presence of disease and dieback.

STRUCTURAL CONDITION is classed as good, fair or poor. This is an indication of the structural integrity of the tree and takes into account significant wounds, decay and quality of branch junctions.

LIFE EXPECTANCY is classed as; less than 10 years, 10-20 years, 20-40 years, or more than 40 years. This is an indication of the number of years before removal of the tree is likely to be required.

Retention Categories

A (marked green on Appendix 5) = retention most desirable. These trees are of very high quality and value with a good life expectancy.

B (marked in blue on Appendix 5) = retention desirable. These trees are of good quality and value with a significant life expectancy.

C (marked in grey on Appendix 5) = trees which could be retained. These trees are of low or average quality and value, and are in adequate condition to remain until new planting could be established.

U (marked in red on Appendix 5) = trees for removal. These trees are in such a condition that any existing value would be lost within 10 years.

Tree ID	Tree Species		Measurements					Crown (m)				Tree Condition						Value		Management		
	Common Name	Latin Name	Maturity	Height (m)	Stems	Stem Dia (mm)	Estimated	Ave Height	N	E	S	W	Roots	Stem	Crown	Comments	Physiological	Structural	Life Expectancy	Amenity	Category	Works
G1	Privet	<i>Ligustrum ovalifolium</i>	Semi-mature	2.5	10+	50 avg	No	0	See Plan				No visual defects	Single & multiple stemmed, Vertical, Stubs, Tight union	Old pruning wounds	Managed hedge.	Fair	Good	20 to 40 yrs	Low	C	No works required
G2	Hawthorn	<i>Crataegus monogyna</i>	Semi-mature	6	10+	100 avg	No	0.5	See Plan				No visual defects	Single & multiple stemmed at base, Vertical, Old pruning wounds, Stubs, Tight union	Old pruning wounds	Sparse previously managed boundary hedge.	Fair	Fair	>40 yrs	Low / Moderate	C	No works required
G3	Holly	<i>Ilex aquifolium</i>	Early-mature	11	10+	130 avg	No	0	2	4	3	2.5	No visual defects	Multiple stemmed at base, Vertical, Old pruning wounds, Epicormic growths, Tight union, Partially included bark	Old pruning wounds	Previously managed as a 5m tall hedge. Now overgrown, although still managed as a hedge on southern side up to 2.5m.	Good	Fair	20 to 40 yrs	Low	C	No works required
T4	Hawthorn	<i>Crataegus monogyna</i>	Semi-mature	7.5	1	90	No	3	3	3	0.5	0.5	No visual defects	Single stemmed, Significant lean, Old pruning wounds, Stubs, Epicormic growths	Small / sparse, Minor deadwood	Sparse crown due to dense surrounding foliage that has been removed.	Fair	Fair	20 to 40 yrs	Low	C	No works required
T5	Hazel	<i>Corylus avellana</i>	Early-mature	11	10+	80	No	2	1	6	4	2	No visual defects	Multiple stemmed at base, Vertical, Stubs, Epicormic growths, Bark damage, Tight union, Partially included bark	Unbalanced, Minor deadwood, Pruning wounds	Northern stems recently removed causing damage to the stems and crown.	Good	Fair	20 to 40 yrs	Low	C	No urgent works required - advised to coppice near to ground level

Tree ID	Tree Species		Measurements					Crown (m)				Tree Condition						Value		Management		
	Common Name	Latin Name	Maturity	Height (m)	Stems	Stem Dia (mm)	Estimated	Ave Height	N	E	S	W	Roots	Stem	Crown	Comments	Physiological	Structural	Life Expectancy	Amenity	Category	Works
G6	Dogwood, Elder, Elm, Oak, Rowan, Willow	<i>Cornus sp.</i> <i>Sambucus sp.</i> <i>Ulmus sp.</i> <i>Quercus sp.</i> <i>Sorbus sp.</i> <i>Salix sp.</i>	Semi-mature	7	10+	100 avg	No	0.5	See Plan				No visual defects	Single & multiple stemmed, Vertical, Stubs, Tight union	Normal, Minor deadwood	Understory to the larger individual trees. Occasional dead stem throughout.	Fair	Good	>40 yrs	Low	C	No works required
T7	Lime	<i>Tilia europaea</i>	Early-mature	12	1	340	No	2	3	2.5	3.5	5	No visual defects	Twin stemmed at 2m, Slight lean, Tight union, Ivy covered	Unbalanced, Minor deadwood		Good	Fair	>40 yrs	Moderate	B	No works required
T8	Lime	<i>Tilia europaea</i>	Early-mature	12	1	360	No	3.5	2.5	3	2.5	3.5	No visual defects	Twin stemmed at 2m, Slight lean, Tight union, Ivy covered	Unbalanced, Minor deadwood		Good	Fair	>40 yrs	Moderate	B	No works required
T9	Maple	<i>Acer campestre</i>	Early-mature	12	1	330	No	2	3	2.5	2.5	4.5	No visual defects	Twin stemmed at 1.5m, Vertical, Old pruning wounds, Ivy covered	Normal, Minor deadwood		Good	Good	>40 yrs	Moderate	B	No works required
T10	Lime	<i>Tilia europaea</i>	Early-mature	12	1	300	No	1	3.5	4	0.5	0.5	No visual defects	Single stemmed, Slight lean, Old pruning wounds, Stubs, Ivy covered	Small / sparse, Unbalanced, Minor deadwood		Fair	Fair	20 to 40 yrs	Moderate	C	No works required
T11	Willow	<i>Salix fragilis</i>	Semi-mature	12	2	180, 170	No	3	4	2	1	6	No visual defects	Twin stemmed at base, Slight lean, Stubs, Epicormic growths, Ivy covered	Unbalanced, Moderate deadwood		Fair	Fair	>40 yrs	Moderate	C	No works required

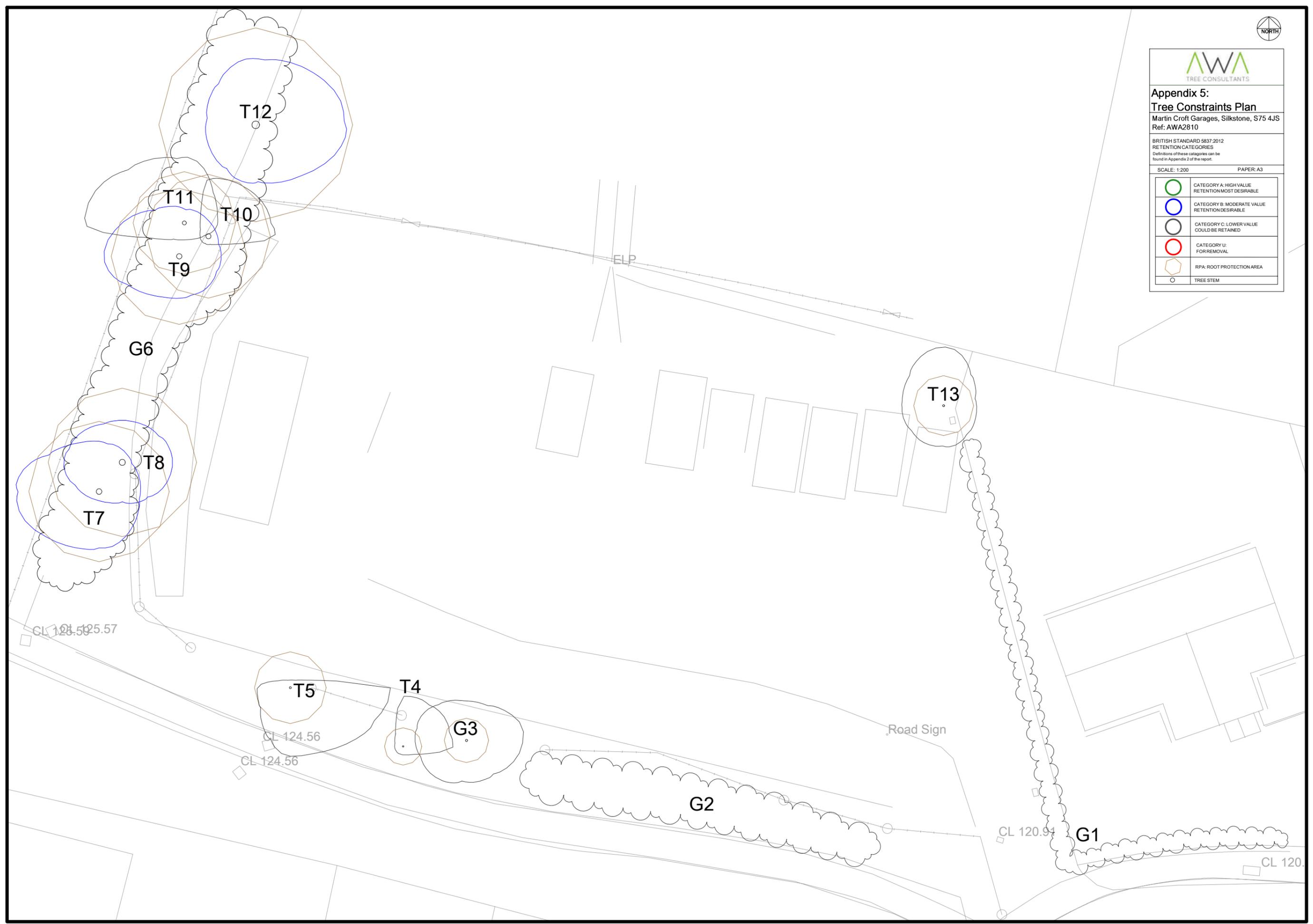
Tree ID	Tree Species		Measurements					Crown (m)				Tree Condition						Value		Management		
	Common Name	Latin Name	Maturity	Height (m)	Stems	Stem Dia (mm)	Estimated	Ave Height	N	E	S	W	Roots	Stem	Crown	Comments	Physiological	Structural	Life Expectancy	Amenity	Category	Works
T12	Willow	<i>Salix fragilis</i>	Early-mature	15	1	470	No	6	4	5.5	3.5	3	No visual defects	Single stemmed, Significant lean, Stubs, Tight union	Moderate dieback, Snapped / hanging branches		Good	Fair	20 to 40 yrs	Moderate	B	No works required
T13	Holly	<i>Ilex aquifolium</i>	Semi-mature	7	7	80	No	1	3.5	2	2.5	2.5	No visual defects, Soil erosion	Multiple stemmed at base, Vertical, Old pruning wounds, Stubs, Tight union, Partially included bark	Normal, Minor deadwood		Fair	Fair	20 to 40 yrs	Low	C	No urgent works required - advised to coppice near to ground level



Appendix 5:
Tree Constraints Plan
 Martin Croft Garages, Silkstone, S75 4JS
 Ref: AWA2810

BRITISH STANDARD 5837:2012
 RETENTION CATEGORIES
 Definitions of these categories can be found in Appendix 2 of the report.

SCALE: 1:200	PAPER: A3
	CATEGORY A: HIGH VALUE RETENTION MOST DESIRABLE
	CATEGORY B: MODERATE VALUE RETENTION DESIRABLE
	CATEGORY C: LOWER VALUE COULD BE RETAINED
	CATEGORY U: FOR REMOVAL
	RPA: ROOT PROTECTION AREA
	TREE STEM





Appendix 6:
Tree Impacts Plan
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BRITISH STANDARD 5837:2012
RETENTION CATEGORIES
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SCALE: 1:200 PAPER: A3

	TREE / HEDGE TO RETAIN
	TREE / HEDGE TO REMOVE
	RPA: ROOT PROTECTION AREA
	TREE STEM

