



ARBORICULTURAL REPORT

& Impact Assessment

to BS5837:2012 at:

Land at
Hall Gardens
Brierley
Barnsley
South Yorkshire
S72 9FF

Prepared for:
FDA Landscape Ltd
Westleigh Hall
Wakefield Rd
Huddersfield
HD8 8QJ

Date: *December 2019*

Reference: AWA2943



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1. Introduction

1.1 Instructions and Brief

- 1.1.1 We have been instructed by Sue Farmer of FDA Landscape Ltd 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 November 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 Ltd.
- 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 refer to the Tree Constraints Plan at **Appendix 5** and for detail of the impacts of the new development refer to the Tree Impacts Plan at **Appendix 6**.

2. The Site

2.1 Location and Description

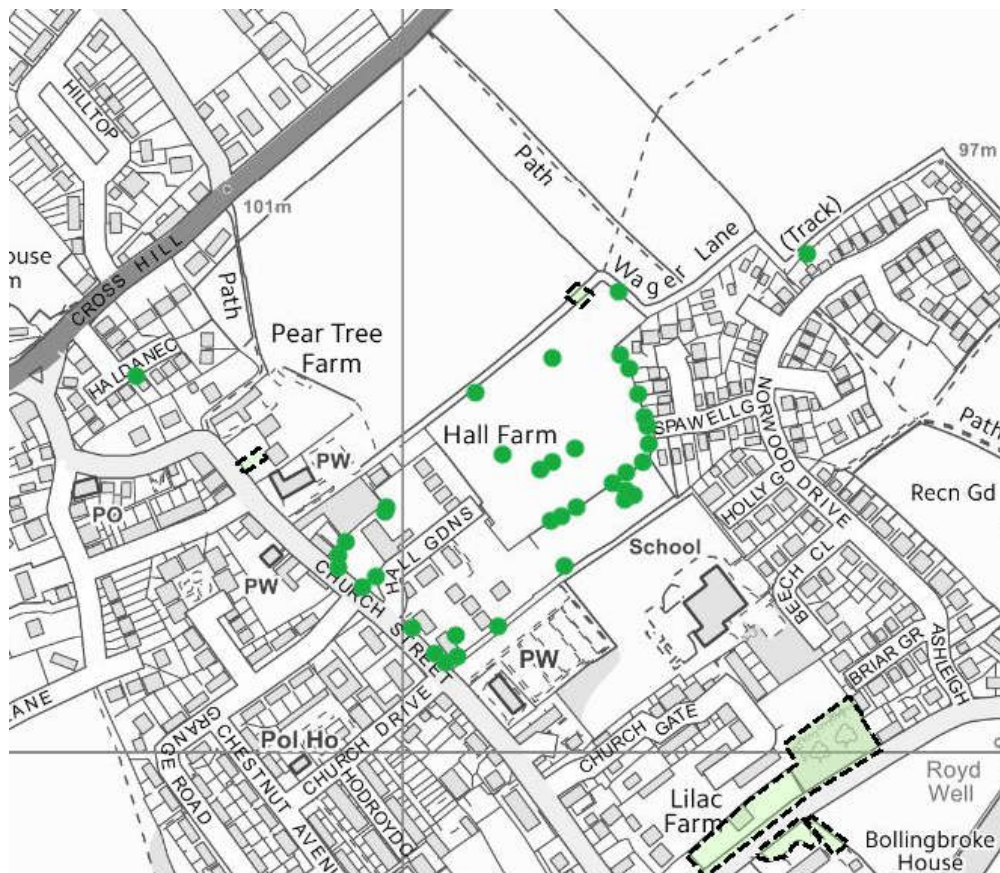
- 2.1.1 The site is located in Brierley, a small town and former civil parish in the Metropolitan Borough of Barnsley, approximately 5 miles to the north east of Barnsley town centre.
- 2.1.2 The site comprises open grassland that has previously been used for the grazing of livestock. The site is surrounded by residential properties to the east, south and west with managed fields to the north.
- 2.1.3 The approximate area of the survey is highlighted in the (2019 Google Earth) image below:



3. The Trees

3.1 Legal

3.1.1 An online check was carried out on 22/11/19 with Barnsley Metropolitan Borough Council to ascertain whether any trees at the site are located within a conservation area or are subject to a Tree Preservation Order (TPO). The check has revealed that many of the trees are subject to a TPO as shown on the accessed plan below:



3.1.2 Due to the large potential penalties for illegally carrying out work to protected trees, before authorising any tree works statutory permission is required.

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 29 items of woody vegetation, comprised of 22 individual trees and 7 groups of trees or shrubs or hedges.
- 3.2.2 Of the surveyed trees: 1 tree is retention category 'U', 3 trees are retention category 'A', 6 trees are retention category 'B', and the remaining 12 trees and 7 groups are retention category 'C' (explanatory details regarding the retention categories are included within Appendix 3).
- 3.2.3 Species diversity at the site is relatively good. There are several Cherry, Hawthorn, Horse Chestnut, Oak and Sycamore trees, and the occasional Ash, Beech, Elder, Lime and Walnut. Hedgerows within the site are generally comprised of Hawthorn and Holly. The site's trees are predominantly early mature to mature with only the occasional younger tree.
- 3.2.4 The significant tree cover within the site consists primarily of large individual trees, most of which are situated close to the boundaries yet with some large specimens within the central area. Due to the large size, age and form of the mature trees, it is possible the site has historically been part of a larger country estate, deer park or similar.
- 3.2.5 The most significant trees at the site are the large mature Beech and Oaks T1, T5 and T22. These trees are prominent throughout the site and due to their age and relatively good overall condition provide particularly high individual value.
- 3.2.6 Close to the northern corner of the site are the Ash trees T9 and T10. Both trees have some crown dieback and large sections of deadwood within their canopies. Due to the prevalence of Ash Dieback in the wider area, the observed defects could be the result of this disease. The trees currently provide some good amenity to the site and the surrounding areas; however, their prospects are likely to be limited. It is advised that the significant deadwood is removed from both trees and that T9 is reduced in height by approximately 5m, regardless of any future development. This will allow the trees to be retained in the current context of the site and extend into the future their suitability for retention within a development. While not within the site boundaries it may also be appropriate for T10 to be similarly pruned in the future.
- 3.2.7 The trees growing close to the eastern boundary include the Hawthorn, Lime and Sycamore trees T14, T15, T16, T17 and T18. These trees provide good collective amenity and some screening between the site and the

neighbouring residential properties. The Sycamore, T18 has a large cavity at the base. To reduce the loading of the potentially weakened stem it is advised that the tree is reduced in height by approximately 3.5m, regardless of any future development. It is recommended that a full inspection and risk assessment is also carried out in the future to assess the trees suitability for retention due to the cavity and associated decay.

- 3.2.8 Several Horse Chestnut trees within the site have symptoms that are consistent with Bleeding Canker of Horse Chestnut. Trees can tolerate this disease for many years; however, it is often fatal, often through a secondary infection of the weakened tree. The trees T23 and T27 have moderate symptoms as described at Appendix 4, and are suitable for retention in the short term, although their prospects are likely to be limited. However, T20 is in a very poor condition, such that its removal is advised regardless of any future development.
- 3.2.9 The hedgerows within the site (G3, G4, G6, G11 and G12) are generally of low arboricultural value; however, they form natural boundaries to the site and provide some screening. It is advised that these hedges are regularly managed within any future development to maintain their suitability for retention.
- 3.2.10 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.
- 3.2.11 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.
- 3.2.12 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.
- 3.2.13 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 a new residential development with associated access, landscaping and facilities. 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, 4 trees will require removal as they are situated in the footprint of the structure or their retention and protection throughout the development is not suitable.

4.2.2 The trees that require removal to facilitate the development are T2, T8, T23 and T27.

4.2.3 All four trees that require removal are of relatively low value, retention category 'C'. The Elder, T2 is of negligible value, while the Walnut and Horse Chestnut trees T8, T23 and T27 have significant defects that limit their value and future prospects.

4.2.4 The loss of several relatively large trees, even though they have limited prospects, will inevitably result in some loss of amenity value within the site. However, the planting of diverse tree species throughout the site, will increase the age diversity of the tree cover and has the potential to increase the long-term amenity value of the site.

4.2.5 The Beech tree, T5 will also require minor pruning, as detailed at Appendix 4 so that boundary fencing can be installed beneath its canopy. The tree is likely to tolerate this minor works with no loss of amenity value in the longer term.

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.

- 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 T9, T15 and T24. 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, due to previous management, and in the case of T9, the works recommended in this report. As such, it is unlikely that significant roots will be within these areas and the retained trees should remain largely unaffected by the works, provided care is taken during construction.
- 4.3.3 New landscaping in the form of access roads and driveways is proposed that encroaches into the edge of the RPA of T1, T14 and T26. The construction of hard surfaces within the RPA can have negative impacts on tree roots. However, the potential negative impacts can often be overcome or minimised by employing a 'no-dig' type construction methods with a porous final surface.
- 4.3.4 The new development encroaches into the RPA of T5, T22 and T26. The construction within the RPA may have negative impacts on tree roots. However, it should be possible to employ special foundation design such as mini/micro pile and suspended beam or a cantilevered foundation, in order to overcome or minimise any negative impact on the tree roots.
- 4.3.5 The design of the new development has considered the trees crown position in relation to the development. 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.
- 4.3.6 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.

4.4.2 The site currently has a lack of young and semi mature trees with the potential to succeed the larger trees as they begin to decline. As such, suitable new tree planting has the potential to mitigate for the required tree removals and improve the longer-term prospects and age diversity of the tree cover.

4.5 Protection of the Retained Trees

- 4.5.1 The retained trees will 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.

5. Signature

I trust this report provides all the required information.

Signed



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

6th December 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.

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.

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. Arboricultural Technician. Cert Arb L3. TechArborA.

Patrick is a trained arborist with 5 years of experience in the private and commercial sectors, both in the UK and New Zealand. Formerly a professional rugby player, Patrick was awarded a distinction in the Extended Diploma in Forestry & Arboriculture and is a technician Member of the Arboricultural Association. Patrick now uses his experience at AWA focusing on BS5837:2012 tree surveys for development projects; this involves accurate tree data collection and the preparation of tree reports 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 DATA

Tree Species		Measurements						Crown (m)				Tree Condition						Value		Management		
Tree ID	Common Name	Latin Name	Maturity	Height (m)	Stems	Stem Diameter (mm)	Estimated	Ave Height	N	E	S	W	Roots	Stem	Crown	Comments	Physiological	Structural	Life Expectancy	Amenity	Category	Works
T1	Oak	<i>Quercus robur</i>	Mature	17	1	1180	No	2	4	10	9.5	7	No visual defects, Soil compaction	Twin stemmed at 2.5m, Vertical, Old pruning wounds, Epicormic growths, Bark damage, Moderate cavities, Minor decay	Normal, Moderate deadwood	Third stem has historically failed at 3m, leaving a large wound with some minor decay. Several smaller cavities higher up on main branches. Central limb in centre of crown has previously snapped out at approx 8m and is now significantly decayed. Limb may require removal in longer term.	Good	Fair	>40 yrs	High	A	No works required
T2	Elder	<i>Sambucus nigra</i>	Early-mature	4.5	7	100 avg	No	1.5	2.5	1.5	2	2	No visual defects, Soil erosion	Multiple stemmed at base, Slight lean, Stubs, Tight union, Partially included bark	Normal, Minor deadwood		Fair	Fair	10 to 20 yrs	Low	C	Removal required to facilitate development
G3	Holly	<i>Ilex aquifolium</i>	Semi-mature	6	10+	140 avg	No	1	See Plan			No visual defects, Soil erosion	Single & multiple stemmed at base, Vertical, Stubs, Bark damage, Minor cavities, Epicormic growths	Old pruning wounds, Minor deadwood	Managed hedgerow.	Fair	Good	>40 yrs	Moderate	C	No works required	

Tree ID	Tree Species		Maturity	Measurements				Crown (m)				Tree Condition						Value		Management		
	Common Name	Latin Name		Height (m)	Stems	Stem Diameter (mm)	Estimated	Ave Height	N	E	S	W	Roots	Stem	Crown	Comments	Physiological	Structural	Life Expectancy	Amenity	Category	Works
G4	Holly	<i>Ilex aquifolium</i>	Semi-mature	6	10+	140 avg	No	1	See Plan				No visual defects, Soil erosion	Single & multiple stemmed at base, Vertical, Stubs, Bark damage, Minor cavities, Epicormic growths	Old pruning wounds, Minor deadwood	Managed hedgerow.	Fair	Good	>40 yrs	Moderate	C	No works required
T5	Beech	<i>Fagus sylvatica</i>	Mature	14	1	1090	No	1	7.5	9.5	8.5	8	Soil compaction, Soil erosion, Exposed roots, Damage to buttress roots	Multiple stemmed at 3m, Slight lean, Old pruning wounds, Stubs, Tight union, Moderate cavities	Moderate deadwood, Stubs	Superficial damage to large exposed buttress roots at base. Several large stubs and minor cavities in crown from previous branch failures.	Fair	Fair	>40 yrs	High	A	Crown raise eastern crown to 2m where boundary fencing is required.
G6	Hawthorn	<i>Crataegus monogyna</i>	Semi-mature	1.5	10+	70 avg	No	0	See Plan				No visual defects, Soil compaction	Single & multiple stemmed at base, Vertical, Stubs, Tight union	Old pruning wounds, Minor deadwood	Managed hedge full of brambles. Occasional Elder.	Fair	Good	20 to 40 yrs	Low	C	Continue regular management
T7	Oak	<i>Quercus robur</i>	Early-mature	11	1	430	No	2	6	5	5	4.5	No visual defects	Multiple stemmed at 2m, Vertical, Old pruning wounds, Stubs, Epicormic growths, Tight union, Partially included bark	Normal, Minor deadwood	Growing within hedgerow.	Good	Fair	>40 yrs	Moderate	B	No works required

TREE DATA

Tree ID	Tree Species		Maturity	Measurements				Crown (m)				Tree Condition					Value		Management			
	Common Name	Latin Name		Height (m)	Stems	Stem Diameter (mm)	Estimated	Ave Height	N	E	S	W	Roots	Stem	Crown	Comments	Physiological	Structural	Life Expectancy	Amenity	Category	Works
T8	Walnut	<i>Juglans regia</i>	Early-mature	9	1	500	No	1	6	6.5	6	5.5	Soil erosion, Exposed roots, Damage to buttress roots	Single stemmed, Significant lean, Old pruning wounds, Stubs, Epicormic growths	Normal, Minor deadwood	Minor damage to exposed roots at base. Significant lean to the east. Metal pipe fixed in ground against base on western side.	Fair	Fair	20 to 40 yrs	Moderate	C	Removal required to facilitate development
T9	Ash	<i>Fraxinus excelsior</i>	Mature	20	1	1030	No	1.5	9.5	9.5	9.5	5.5	No visual defects, Soil compaction	Multiple stemmed at 3m, Vertical, Old pruning wounds, Stubs, Moderate cavities, Minor decay	Moderate dieback, Major deadwood, Slightly unbalanced	Several moderate sized cavities on main stems and upper limbs. Several large dead branches throughout the crown.	Fair	Fair	20 to 40 yrs	High	C	Reduce height by approx 5m and remove significant deadwood, regardless of future development
T10	Ash	<i>Fraxinus excelsior</i>	Mature	17	1	720	No	3	6	1.5	7	8.5	No visual defects, Soil compaction	Twin stemmed at 3.5m, Vertical, Stubs, Bark damage, Minor cavities	Small / sparse, Moderate dieback, Major deadwood, Unbalanced	Several holes, possible roosts, on eastern stem above 5m. Several large stubs from previously failed branches and several large dead branches throughout the crown. <i>Inonotus hispidus</i> fungal bracket on eastern stem at 6m.	Fair	Fair	20 to 40 yrs	Moderate	C	Remove significant deadwood, regardless of future development. Likely to need further crown reduction in future
G11	Hawthorn	<i>Crataegus monogyna</i>	Semi-mature	1.5	10+	70 avg	No	0	See Plan				No visual defects, Soil compaction	Single & multiple stemmed at base, Vertical, Stubs, Tight union	Old pruning wounds, Minor deadwood	Managed hedge full of brambles. Occasional Elder.	Fair	Good	20 to 40 yrs	Low	C	Continue regular management

TREE DATA

Tree Species		Measurements						Crown (m)				Tree Condition						Value		Management		
Tree ID	Common Name	Latin Name	Maturity	Height (m)	Stems	Stem Diameter (mm)	Estimated	Ave Height	N	E	S	W	Roots	Stem	Crown	Comments	Physiological	Structural	Life Expectancy	Amenity	Category	Works
G12	Holly	<i>Ilex aquifolium</i>	Semi-mature	2	10+	100 avg	No	0	See Plan				No visual defects, Limited access around base	Single & multiple stemmed at base, Vertical, Stubs, Tight union	Normal	Managed hedgerow, becoming overgrown.	Fair	Good	>40 yrs	Low	C	Continue regular management
T13	Hawthorn	<i>Crataegus monogyna</i>	Early-mature	7.5	2	260, 220	Yes	2	2.5	3	3	3.5	No visual defects, Limited access around base	Twin stemmed at base, Slight lean	Normal, Minor deadwood	Growing within hedgerow. Limited visibility of base and stems.	Good	Good	>40 yrs	Moderate	C	No works required
T14	Sycamore	<i>Acer pseudoplatanus</i>	Early-mature	13	1	670	No	2	4	5	6	5.5	No visual defects	Single stemmed, Vertical, Old pruning wounds, Stubs, Epicormic growths, Minor cavities	Normal, Minor deadwood		Good	Good	>40 yrs	Moderate	B	No works required
T15	Sycamore	<i>Acer pseudoplatanus</i>	Mature	15	1	840	No	3	6.5	6	5.5	7.5	No visual defects	Single stemmed, Vertical, Old pruning wounds, Stubs, Epicormic growths, Minor cavities	Normal, Minor deadwood	Several eastern branches have been unsympathetically pruned.	Fair	Good	>40 yrs	Moderate	B	No works required
T16	Hawthorn	<i>Crataegus monogyna</i>	Early-mature	7	1	310	No	2	2.5	2.5	3	4	No visual defects	Single stemmed, Slight lean, Old pruning wounds, Stubs, Epicormic growths	Small / sparse, Unbalanced, Moderate deadwood	Several large old pruning wounds on main stem at 2m.	Fair	Fair	>40 yrs	Low	C	No works required

TREE DATA

Tree ID	Tree Species		Maturity	Measurements				Crown (m)				Tree Condition						Value		Management		
	Common Name	Latin Name		Height (m)	Stems	Stem Diameter (mm)	Estimated	Ave Height	N	E	S	W	Roots	Stem	Crown	Comments	Physiological	Structural	Life Expectancy	Amenity	Category	Works
T17	Lime	<i>Tilia europaea</i>	Mature	15	1	730	No	2	4.5	4	4.5	4.5	Damage to buttress roots	Single stemmed, Vertical, Old pruning wounds, Epicormic growths, Tight union, Minor cavities	Normal, Minor deadwood	Several thin wounds on buttresses at base, with no visible associated decay. Dense epicormic growth in centre of crown.	Good	Fair	>40 yrs	High	B	No works required
T18	Sycamore	<i>Acer pseudoplatanus</i>	Mature	17	1	830	No	2	4	5	6.5	5.5	No visual defects	Single stemmed, Slight lean, Old pruning wounds, Stubs, Epicormic growths, Bark damage, Major cavity, Major decay	Stubs, Minor deadwood	Large cavity on eastern side of stem at base with active central decay. Full health & safety inspection advised but tree may require removal in longer term.	Fair	Poor	10 to 20 yrs	High	C	Reduce height by approx 3.5m to reduce stress loading of potentially weak stem, regardless of future development
G19	Cherry	<i>Prunus sp.</i>	Semi-mature	5	10+	110 avg	Yes	2	See Plan				No visual defects, Limited access around base	Multiple stemmed, Vertical, Old pruning wounds, Bark damage	Normal	Linear group of trees situated in neighbouring land.	Good	Fair	>40 yrs	Low	C	No works required

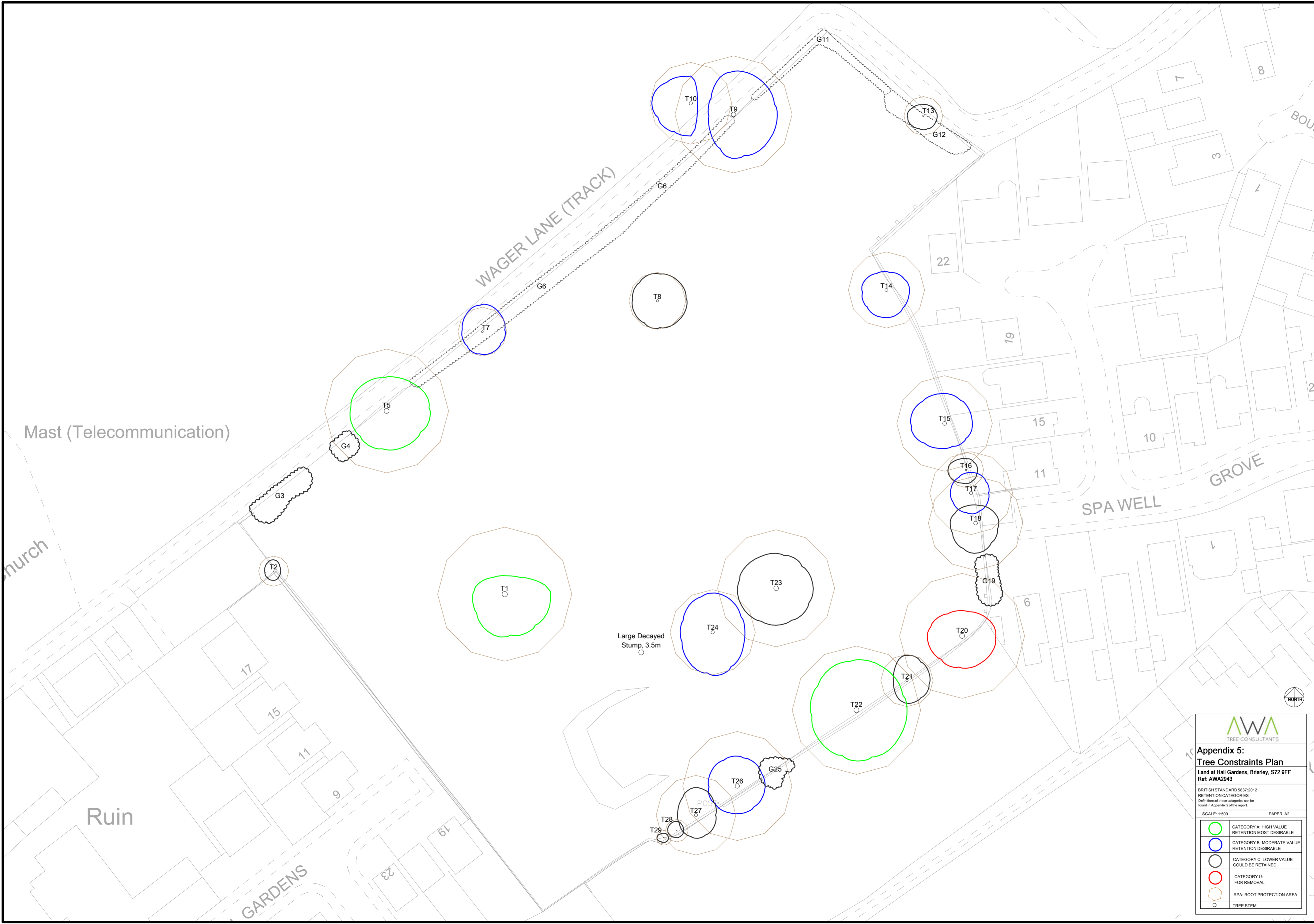
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Tree ID	Tree Species		Maturity	Measurements				Crown (m)				Tree Condition						Value		Management		
	Common Name	Latin Name		Height (m)	Stems	Stem Diameter (mm)	Estimated	Ave Height	N	E	S	W	Roots	Stem	Crown	Comments	Physiological	Structural	Life Expectancy	Amenity	Category	Works
T20	Horse Chestnut	<i>Aesculus hippocastanum</i>	Mature	16	1	1100	No	2	5.5	7.5	7	7.5	Fungus, Decay, Damage to buttress roots	Twin stemmed at 2m, Old pruning wounds, Stubs, Bark damage, Major cavities, Major decay	Moderate dieback, Major deadwood, Snapped / hanging branches	Tree appears to be in an advanced state of decline. Extensive fungal activity at base and radiating out from it. Bark damage and necrosis extending 2/3 around stem, from base up to 5m. Large southern stem has previously failed and the large stub remaining is significantly decayed.	Poor	Poor	<10 yrs	Moderate	U	Remove to ground level or as 5m monolith, regardless of future development
T21	Hawthorn	<i>Crataegus monogyna</i>	Early-mature	12	2	330, 320	No	1	5.5	5	5	3	No visual defects	Twin stemmed at 0.5m, Vertical, Old pruning wounds, Stubs, Tight union, Partially included bark, Bark damage	Normal, Minor deadwood		Good	Fair	>40 yrs	Moderate	C	No works required
T22	Oak	<i>Quercus robur</i>	Mature	17	1	1130	No	3	11	11	11	10	No visual defects	Multiple stemmed at 4m, Vertical, Stubs	Stubs, Major deadwood	Occasional large dead branch throughout the crown. Will require deadwood removal if close to future development.	Good	Good	>40 yrs	High	A	No works required

TREE DATA

Tree Species		Measurements						Crown (m)				Tree Condition						Value		Management		
Tree ID	Common Name	Latin Name	Maturity	Height (m)	Stems	Stem Diameter (mm)	Estimated	Ave Height	N	E	S	W	Roots	Stem	Crown	Comments	Physiological	Structural	Life Expectancy	Amenity	Category	Works
T23	Horse Chestnut	<i>Aesculus hippocastanum</i>	Mature	14	1	1030	No	1.5	7.5	8	8	8.5	Exposed roots, Soil compaction, Damage to buttress roots	Multiple stemmed at 2.5m, Slight lean, Old pruning wounds, Bark damage, Tight union, Minor cavities	Moderate deadwood	Moderate damage with some historical decay to roots at base. Several medium sized areas of bark damage and necrosis from base up to 2m and some stem bleeding. Symptoms consistent with Bleeding Canker of Horse Chestnut. Limited longer term prospects.	Fair	Fair	20 to 40 yrs	Moderate	C	Removal required to facilitate development
T24	Sycamore	<i>Acer pseudoplatanus</i>	Mature	14	1	750	No	2	8.5	7	9.5	7	No visual defects	Single stemmed, Vertical, Old pruning wounds, Stubs, Epicormic growths	Stubs, Moderate deadwood		Fair	Good	>40 yrs	High	B	No works required
G25	Sycamore	<i>Acer pseudoplatanus</i>	Semi-mature	7	8	110 avg	No	1	See Plan				No visual defects	Multiple stemmed at base, Vertical, Stubs, Epicormic growths	Normal, Minor deadwood	Linear group of young to semi mature trees growing in neighbouring land. Occasional Ash sapling and 1 semi mature Cherry.	Good	Fair	20 to 40 yrs	Low	C	No works required

Tree ID	Tree Species		Maturity	Measurements				Crown (m)				Tree Condition						Value		Management		
	Common Name	Latin Name		Height (m)	Stems	Stem Diameter (mm)	Estimated	Ave Height	N	E	S	W	Roots	Stem	Crown	Comments	Physiological	Structural	Life Expectancy	Amenity	Category	Works
T26	Lime	<i>Tilia europaea</i>	Mature	17	1	960	No	1.5	6.5	6	6	6.5	No visual defects, Soil compaction	Single stemmed, Vertical, Old pruning wounds, Epicormic growths, Bark damage	Normal, Minor deadwood	Superficial bark damage to buttress roots at base with no visible associated decay. Dense epicormic growth in centre of lower crown. Barbed wire attached to stem at 1m.	Fair	Good	>40 yrs	Moderate	B	No works required
T27	Horse Chestnut	<i>Aesculus hippocastanum</i>	Early-mature	13	1	700	No	2	6	4.5	5	4	No visual defects, Soil compaction	Single stemmed, Vertical, Old pruning wounds, Stubs, Bark damage, Minor cavities	Slightly unbalanced, Moderate deadwood	Large areas of bark damage and necrosis extending 2/3 round the stem from base up to 2m, and various bacterial cankers on upper limbs. Barbed wire attached to stem at 1m. Full health & safety inspection advised. Very limited long term prospects.	Fair	Fair	10 to 20 yrs	Moderate	C	Removal required to facilitate development
T28	Elder	<i>Sambucus nigra</i>	Semi-mature	6	8	70 avg	No	1	2	1.5	1.5	2	No visual defects	Multiple stemmed at base, Vertical, Stubs, Epicormic growths, Tight union	Normal		Good	Fair	20 to 40 yrs	Low	C	No works required
T29	Sycamore	<i>Acer pseudoplatanus</i>	Semi-mature	8	1	130	No	1	1	1	1	1.5	No visual defects	Single stemmed, Vertical, Tight union, Partially included bark	Normal		Good	Good	>40 yrs	Low	C	No works required



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**Appendix 5:
Tree Constraints Plan**
Land at Hall Gardens, Brierley, S72 9FF
Ref: AWA2943

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

SCALE: 1:500 PAPER: A2

	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



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Appendix 6:
Tree Impacts Plan
Land at Hall Gardens, Brierley, S72 9FF
Ref: AWA2943

BRITISH STANDARD 5837:2012
SCALE: 1:500 PAPER: A2

	TREE/HEDGE TO BE RETAINED
	TREE/HEDGE TO BE REMOVED
	RPA: ROOT PROTECTION AREA
	TREE STEM