TREE CONSULTANTS

ARBORICULTURAL REPORT

& Impact Assessment

To **BS5837:2012** at:

Stonehaven,
Higham Lane,
Dodworth,
Barnsley,
S75 3LA

Prepared for:
White Agus Partnership
8 Morston Business Park
Whaley Road
Barugh Green
Barnsley
S75 1HQ

Date: *March 2017*

Reference: *AWA1834*

Institute of Chartered Foresters
Registered Consultant

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1. Introduction

1.1 Instructions and Brief

1.1.1 We are instructed by Robert Agus of 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 March 2017.

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 The author's 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 to the north of Dodworth, a village in the metropolitan borough of Barnsley in South Yorkshire.

2.1.2 The site is a parcel of land formed by a wider residential garden situated to the north.

3. The Trees

3.1 Legal

3.1.1 Due to the large potential penalties for illegally carrying out work to protected trees, before authorising any tree works a check should be made with the Local Planning Authority to see if the trees are covered by a Tree Preservation Order or if they are within a Conservation Area (unless such works are approved by planning permission). If either applies, then statutory permission is required before any works can take place.

3.1.2 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 25 items of woody vegetation, comprised of 21 individual trees and 4 groups of trees or shrub/hedge groups.

3.2.2 All 25 trees are retention category 'C' (explanatory details regarding the retention categories are included within Appendix 3).

3.2.3 The tree cover within the site consists of closed planted groups of trees and cypress hedges, situated to the east and the south of the site. The central area of the site contains nothing of arboricultural significance.

3.2.4 The tree species at the site are quite limited. Maple is the dominant tree species, with occasional Sorbus, and Cypress hedges along the boundary.

3.2.5 Individually, none of the trees are particularly noteworthy and are all lower value specimens. However, collectively the trees along the south-eastern and southern boundary (T3 to T14 and T18 to T25) do provide a moderate amount of visual amenity and moderate arboricultural value. They collectively provide good visual screening from the adjacent land.

3.2.6 The trees (T3 to T14 and T18 to T25) appear to have been planted around the same time at around 2.5 x 2.5m spacing. The trees do not appear to have any significant active management in recent history. The planting is very dense in parts with many smaller suppressed trees and several trees with minor defects. It would be beneficial to manage the group by thinning out by around 25%, removing the poorer trees to allow more room for the remaining trees to grow.

3.2.7 The north-eastern boundary of the site is formed by recently established cypress trees (G1). This boundary group offers a good visual screen between the adjacent lorry park and site. This group has the potential to become much larger in later years and it is advised this boundary group is managed at its current height and width.

3.2.8 The length of the southern boundary is comprised of a linear group of cypress trees (G15, G16, and G17). These three groups collectively form one unbroken hedge-like feature that is ideally suited to shielding views into and out of the site. Many of the trees are becoming very tall, and they have the potential to grow taller still. As such, it would be suitable management to reduce the height of the trees and maintain them as a more formal hedge feature.

3.2.9 To the north east of the site, adjacent to a garage, is a lone Maple tree (T2), situated in what was once a manged planting bed. This tree appears to be in decline and it has only limited long term prospects.

3.2.10 The tree Root Protection Area (RPA) detailed on the Tree Constraints Plan at Appendix 5, is 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 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 residential property and associated 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, no trees will require removal to facilitate the new development.

4.2.2 Trees will require pruning management to implement the new design proposals, including any access facilitation pruning. The trees T18 and T19 will require crown lifting to 5m from ground level. It is likely the trees will tolerate this work and that the visual amenity provided by the trees will not be significantly diminished.

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 The new building encroaches very slightly into the RPA of T19; however, due to the good vigour of the tree, it is considered that the tree will tolerate this minor encroachment without negative impacts. Provided care is taken during construction.

4.3.3 The trees to the south of the development will cast some shade over the new dwelling. Some shade from trees may be beneficial. In particular, deciduous trees give shade in summer but allow access to sunlight in winter. Recommended tree works, including crown lifting, thinning of the poorer trees and the reduction in height of the cypress hedges, would reduce the direct shade and would avoid excessive shading, and give adequate provision for future tree growth.

4.3.4 The buildability of the proposed 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 suitable tree works and new tree planting throughout the north and west of the site as part of a soft landscaping scheme.

4.4.2 As such, suitable new tree works and planting has the potential to improve the sites long term 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.*

30th March 2017

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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: Arboricultural Impacts Plan

Appendix 1: Authors Qualifications & Experience

Mr Adam Winson *Chartered Arboriculturist, MSc, BSc (Hons), ND, 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 and the ICF top student award. 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 Guy Baxter *FdSc (Arb). ND Arb. TechArborA*

Guy joined AWA Tree Consultants at the start of 2015, after seven years work experience within the tree care profession. He has a Foundation Degree in Arboriculture and is in the final stages of a BSc (Hons) Degree in Arboriculture and Urban Forestry. He is a Technician Member of the Arboricultural Association and an Associate of the Institute of Chartered Foresters, working towards becoming a Chartered Arboriculturist. His work focuses on tree risk assessments and undertaking BS5837:2012 tree surveys for development projects; this involves tree inspections, the preparation of Tree Reports, Arboricultural Impact Assessments and Tree Protection Schemes to BS 5837:2012.

Mr James Brown *BSc (Hons) Arboriculture. TechArborA*

James has a BSc (Hons) in Arboriculture, attaining first class honours, as well as being awarded the Institute of Chartered Forester's Student award. James joined AWA after working in Europe's largest tree nursery and Local Authority tree officer work, for Tameside Metropolitan Borough Council. He is a Technician Member of the Arboricultural Association and an Associate of the Institute of Chartered Foresters, working towards becoming a Chartered Arboriculturist. His main work consists of tree surveys for development projects, involving tree inspections, the preparation of Tree Reports, Arboricultural Impact Assessments and Tree Protection Schemes 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 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.

Appendix 4: Tree Data

	Tree Species		Measurements					Crown (m)					Tree Condition							Value		Management
Tree ID	*Common Name*	*Latin Name*	*Maturity*	*Height (m)*	*Stems*	*Stem Dia (mm)*	*Estimated*	*Ave Height*	*N*	*E*	*S*	*W*	*Roots*	*Stem*	*Crown*	*Comments*	*Physiology*	*Structural*	*Life Expectancy*	*Amenity*	*Category*	*Works*
G1	Leyland Cypress	*X Cupressocyparis leylandii*	Semi-mature	6	1	100	No	0	1	1	1	1	A row of planted boundary trees. Screening from an adjacent lorry park. Excellent screening value. Will require management works in later years.				Fair	Fair	>40 yrs	Mod	**C**	Maintain at current height and width.
T2	Maple	*Acer platanoides*	Semi-mature	7.5	1	270	No	1.5	3	2	3.5	3	Soil compaction. Soil erosion. Increase in soil level	Single stemmed. Old pruning wounds. Stubs. Bark damage. Minor cavities	Small / sparse. Minor deadwood	Situated in planter	Fair	Poor	20 to 40 yrs	Low	**C**	No works
T3	Maple	*Acer pseudoplatanus*	Semi-mature	11	1	310	No	3	3.5	4	2	4	No visual defects	Single stemmed. Twin stemmed. at 3m. Vertical. Old pruning wounds. Stubs. Bark damage	Slightly unbalanced		Fair	Fair	>40 yrs	Low	**C**	No works
T4	Maple	*Acer pseudoplatanus*	Semi-mature	12	1	210	No	3	2.3	3	1	1	No visual defects	Single stemmed	Small / sparse		Fair	Fair	10 to 20 yrs	Low	**C**	No works
T5	Sorbus	*Sorbus aria*	Semi-mature	5.5	1	140	No	1	1	3.5	1	1	No visual defects	Single stemmed. Slight lean. Stubs	Small / sparse. Unbalanced		Fair	Fair	10 to 20 yrs	Low	**C**	No works
T6	Maple	*Acer platanoides*	Semi-mature	13	1	230, 200	No	2	2.5	4	4	2	No visual defects	Twin stemmed. at base. Vertical. Stubs	Normal		Fair	Fair	>40 yrs	Low	**C**	No works

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	Tree Species		Measurements					Crown (m)					Tree Condition							Value		Management
Tree ID	*Common Name*	*Latin Name*	*Maturity*	*Height (m)*	*Stems*	*Stem Dia (mm)*	*Estimated*	*Ave Height*	*N*	*E*	*S*	*W*	*Roots*	*Stem*	*Crown*	*Comments*	*Physiology*	*Structural*	*Life Expectancy*	*Amenity*	*Category*	*Works*
T7	Maple	*Acer saccharinum*	Early-mature	14	2	270, 290	No	2.5	4	3.5	2.5	4	No visual defects	Twin stemmed. at base. Slight lean. Stubs. Bark damage	Normal		Fair	Fair	>40 yrs	Low	**C**	No works
T8	Sorbus	*Sorbus aria*	Semi-mature	7	1	150	No	2	1	5	2	1	No visual defects	Single stemmed. Significant lean. Stubs. Bark damage	Small / sparse. Minor dieback. Minor deadwood. Unbalanced	Limited long term value	Fair	Fair	<10 yrs	Low	**C**	No works
T9	Maple	*Acer platanoides*	Semi-mature	13	1	250	No	3	3	1	1.5	4	No visual defects	Single stemmed. Vertical. Stubs	Normal		Good	Fair	>40 yrs	Low	**C**	No works
T10	Maple	*Acer platanoides*	Semi-mature	14	1	180	No	4	1	2.5	2.5	1	No visual defects	Single stemmed. Vertical	Small / sparse		Fair	Fair	20 to 40 yrs	Low	**C**	No works
T11	Maple	*Acer platanoides*	Semi-mature	13	1	190	No	1.5	3	1	2	5.5	No visual defects	Single stemmed. Twin stemmed. at 2m. Slight lean	Normal		Fair	Fair	20 to 40 yrs	Low	**C**	No works
T12	Sorbus	*Sorbus aria*	Semi-mature	9	2	110, 120	No	1	1.5	4	0.5	0.5	No visual defects	Twin stemmed. at base. Slight lean. Bark damage. Old pruning wounds. Stubs	25% dead / absent. Small / sparse. Unbalanced	Limited long term value	Fair	Poor	20 to 40 yrs	Low	**C**	No works

	Tree Species		Measurements					Crown (m)					Tree Condition							Value		Management
Tree ID	*Common Name*	*Latin Name*	*Maturity*	*Height (m)*	*Stems*	*Stem Dia (mm)*	*Estimated*	*Ave Height*	*N*	*E*	*S*	*W*	*Roots*	*Stem*	*Crown*	*Comments*	*Physiology*	*Structural*	*Life Expectancy*	*Amenity*	*Category*	*Works*
T13	Maple	*Acer platanoides*	Semi-mature	14	1	190	No	4	1.5	3.5	3	2	No visual defects	Single stemmed. Vertical. Stubs	Normal		Fair	Fair	>40 yrs	Low	**C**	No works
T14	Maple	*Acer platanoides*	Semi-mature	13	1	210	Yes	1.5	1.5	1	5	5.6	No visual defects	Single stemmed. Vertical	Normal		Good	Good	>40 yrs	Low	**C**	No works
G15	Leyland Cypress	*X Cupressocyparis leylandii*	Early-mature	17	9	350	No	0	2	2	2	2	Established hedge group situated along the boundary. Good screening value from the adjacent lorry park.				Good	Good	>40 yrs	Mod	**C**	Maintain at current hight and width. Or consider reducing in height
G16	Leyland Cypress	*X Cupressocyparis leylandii*	Semi-mature	4.5	10	100	No	0	1	1	1	1	Younger hedge group situated along a boundary. Good screening value from the adjacent lorry park.				Fair	Fair	20 to 40 yrs	Low	**C**	No works
G17	Leyland Cypress	*X Cupressocyparis leylandii*	Early-mature	15	4	350	No	0	2	2	2	2	Established hedge group situated along the boundary. Good screening value from the adjacent lorry park.				Good	Good	>40 yrs	Mod	**C**	Maintain at current hight and width. Or consider reducing in height
T18	Maple	*Acer platanoides*	Early-mature	15	1	370	No	3	7	6.5	4	1	No visual defects	Single stemmed. Multiple stemmed. at 3m. Vertical	Normal	Part of a closely planted group of trees with moderate collective value.	Good	Good	>40 yrs	Mod	**C**	Crown lift to 5m

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	Tree Species		Measurements					Crown (m)					Tree Condition							Value		Management
Tree ID	*Common Name*	*Latin Name*	*Maturity*	*Height (m)*	*Stems*	*Stem Dia (mm)*	*Estimated*	*Ave Height*	*N*	*E*	*S*	*W*	*Roots*	*Stem*	*Crown*	*Comments*	*Physiology*	*Structural*	*Life Expectancy*	*Amenity*	*Category*	*Works*
T19	Maple	*Acer saccharinum*	Early-mature	16	1	510	No	3	6.5	3	6	3.5	No visual defects	Single stemmed. Multiple stemmed. Vertical. at 2m. Stubs. Tight union. Partially included bark	Normal	Part of a closely planted group of trees with moderate collective value.	Fair	Fair	>40 yrs	Mod	**C**	Crown lift to 5m
T20	Maple	*Acer platanoides*	Semi-mature	10	1	230	No	2.5	0.5	2.5	5	2	No visual defects	Single stemmed. Twin stemmed. at 2m. Significant lean	Small / sparse. Overhanging adjacent land. Slightly unbalanced	Part of a closely planted group of trees with moderate collective value.	Good	Good	10 to 20 yrs	Low	**C**	No works
T21	Maple	*Acer platanoides*	Semi-mature	6	2	150, 160	No	2	5	2	0.5	5	No visual defects	Single stemmed. at base. Vertical. Stubs. Old pruning wounds. Ivy covered	Small / sparse	Part of a closely planted group of trees with moderate collective value.	Fair	Fair	20 to 40 yrs	Low	**C**	No works
T22	Maple	*Acer pseudoplatanus*	Early-mature	14	2	310, 270	No	4	4	3	6	3.5	No visual defects	Twin stemmed. at base. Vertical. Stubs	Normal	Part of a closely planted group of trees with moderate collective value.	Good	Good	>40 yrs	Mod	**C**	No works
T23	Maple	*Acer saccharinum*	Early-mature	15	3	210, 260, 270	No	3	5.5	3.5	6	4	No visual defects	Multiple stemmed. at base. Slight lean	Normal	Part of a closely planted group of trees with moderate collective value.	Fair	Fair	>40 yrs	Mod	**C**	No works
T24	Sorbus	*Sorbus aria*	Semi-mature	5	10	50	No	0	5.5	4	3.5	1	No visual defects	Multiple stemmed. at base. Vertical	Normal	Part of a closely planted group of trees with moderate collective value.	Fair	Poor	<10 yrs	Low	**C**	No works

	Tree Species		Measurements					Crown (m)					Tree Condition							Value		Management
Tree ID	*Common Name*	*Latin Name*	*Maturity*	*Height (m)*	*Stems*	*Stem Dia (mm)*	*Estimated*	*Ave Height*	*N*	*E*	*S*	*W*	*Roots*	*Stem*	*Crown*	*Comments*	*Physiology*	*Structural*	*Life Expectancy*	*Amenity*	*Category*	*Works*
T25	Maple	*Acer pseudoplatanus*	Early-mature	13	1	320	No	2	6	3	4	5	No visual defects	Single stemmed. Twin stemmed. at 3m. Vertical. Stubs	Normal	Part of a closely planted group of trees with moderate collective value.	Good	Good	>40 yrs	Mod	**C**	No works

T2
G1
T3
T4
T7
T5
T9
T6
T8
T11
T10
T14
T13
T12
T19
T21
T18
G15
T24
T25
G16
T20
T22
T23
G17

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Appendix 5:
Tree Constraints Plan

Stonehaven, Dodworth
Ref: AWA1834

BRITISH STANDARD 5837:2012
RETENTION CATEGORIES
Definitions of these catagories 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

T2
G1
T3
T4
T7
T5
T9
T6
T8
T11
T10
T14
T12
T13
G15
T21
T19
T18
T24
T25
G16
T20
T22
T23
G17

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Appendix 6:
Tree Impacts Plan

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SCALE: 1:200 PAPER: A3

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