TREE CONSULTANTS

ARBORICULTURAL REPORT

to BS 5837:2012 at:

Somerlees,
Lane Head Road,
Cawthorne,
Barnsley,
South Yorkshire
S75 4AA

Prepared for:
FDA Landscape Ltd
Westleigh House,
Wakefield Road,
Huddersfield,
West Yorkshire
HD8 8QJ

Date: *July 2018*

Reference: *AWA2265*

Institute of Chartered Foresters
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1. Introduction

1.1 Instructions and Brief

1.1.1 We were 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 June 2018.

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 James Brown BSc (Hons) Arboriculture, MArborA, 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 please refer to the Tree Constraints Plan at **Appendix 5.**

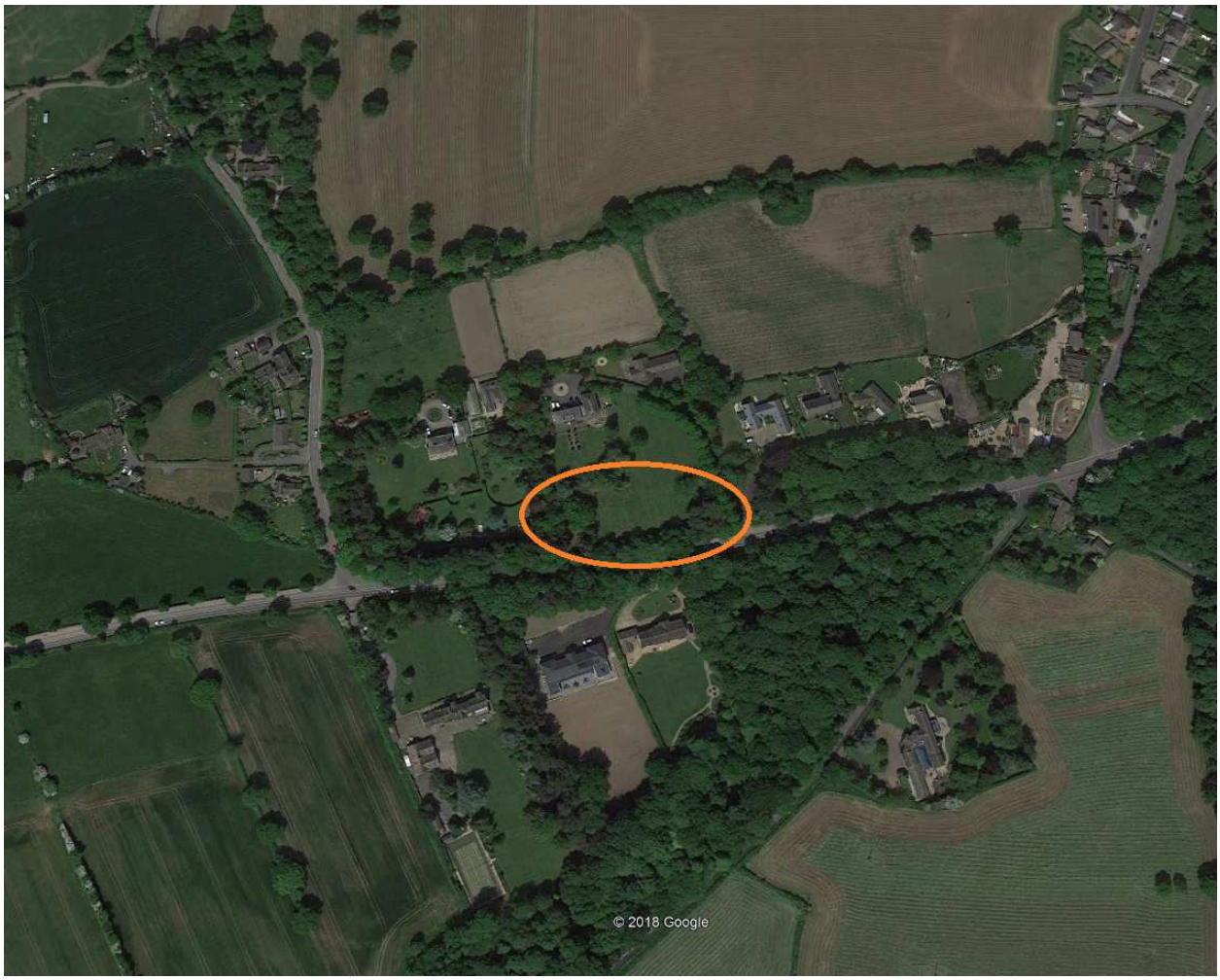
2. The Site

2.1 Location & Description

2.1.1 The site is located on Lane Head Road in Cawthorne, a village and civil parish in the Metropolitan Borough of Barnsley, South Yorkshire.

2.1.2 The site is a section of the garden of a detached residential property. The property is situated to the north of the site with adjacent residential properties to the east and west. Lane Head Road runs along the site's southern boundary.

2.1.3 The approximate survey area has been highlighted in the (2016) image below:



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. 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 64 items of woody vegetation, comprised of 62 individual trees and 2 groups of trees or hedge groups.

3.2.2 Of the surveyed trees: 2 trees are retention category 'U', 2 trees are retention category 'A', 31 trees are retention category 'B', and the remaining 29 trees or 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 good with a wide variety of species including Ash, Lime, Sycamore, Oak, Beech, Horse Chestnut, Pine, Yew, Fir, Holly, Gum, Cherry and Hawthorn. The site's trees had a good age diversity with a mix of semi-mature, early-mature and mature trees.

3.2.4 Trees T2 to T27 form a dense band along the site's southern roadside boundary. Collectively the trees form a significant landscape feature and provide screening from the neighbouring road. However, individually many of the trees are only of lower value. The most significant trees along this boundary are the large mature Oak T8 and Sycamores T13, T16 and T20.

3.2.5 It is recommended to remove the deadwood which overhangs the road and footpath from the crowns of trees T4, T8, T13, T16 and T20 regardless of future development at the site, and a failed stem at the site's south western corner is also overhanging the footpath and requires removal (as indicated on the Tree Constraints Plan at Appendix 5). It is also recommended to

crown lift the lower branches of G7 from over the footpath.

3.2.6 The large mature Sycamore T16 has good visual amenity value; however, it has structural defects including open cavities at the base with decay and rot into the main stem. Due to its prominent roadside location and associated high target value, a separate formal risk assessment of the tree is recommended, to assess if it poses an unacceptable risk to people or property and suitable management.

3.2.7 The Limes T46, T48, T49 and T50 border the site's eastern boundary. The trees are all in good overall condition and collectively are a high amenity value feature forming an avenue of trees leading down the property's driveway.

3.2.8 The Oak T44 is a large prominent tree in good overall condition and provides high amenity value to the site.

3.2.9 The Ash T45 and T47 are in poor condition, with considerable dieback and deadwood in their crowns and large open cavities to their main stems with extensive decay. Tree T45 has had previous crown reduction works undertaken in the past, which has made it less of a risk in the short term. Both trees are unsuitable for retention close to a new development at the site, with T47 requiring extensive pruning works or removal regardless of development at the site. Both trees could be heavily pruned to retain their habitat value in the short term; however, the removal of both trees would be a more suitable long-term option.

3.2.10 A group of Pine and Beech trees are situated to the site's south eastern corner (T51 to T63). The majority of the Pines have considerable deadwood in their lower crowns, which is typical of their species. The Beech T57 has been dead for some time and requires removal regardless of development at the site. It is recommended to remove the significant deadwood from the crown of T56 and to remove the northern branch which is rubbing against and causing damage to the neighbouring Pine T55.

3.2.11 Trees T28 to T34 are situated along the site's western boundary and form the eastern edge of an adjacent woodland type group. Trees T34 to T38 were inaccessible due to their adjacent locations and so were only given cursory inspections with measurements estimated and condition value indicative only.

3.2.12 The Beech hedge G64 is in good overall condition, has been well managed and provides good screening between the site and the neighbouring residential property.

3.2.13 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.

3.2.14 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.

3.2.15 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.

3.2.16 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.

3.3 Arboricultural Development Advice

3.3.1 The higher value retention category `A' and `B' trees and groups should be retained, where possible, and incorporated into any new development design.

3.3.2 Where suitable, those category `C' trees and groups with reasonable future prospects (as detailed in Appendix 4) should be retained as part of any new development. However, care should be taken to avoid misplaced tree retention; attempts to retain too many or unsuitable trees on a site can result in excessive pressure on the trees during demolition or construction work, or post-completion demands for their removal.

3.3.3 If required by the development proposals, occasional lower value, retention category `C' trees and groups could be removed, and replacement planting would largely mitigate their losses.

3.3.4 The tree Root Protection Area (RPA) detailed on the Tree Constraints Plan at Appendix 5, should be 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.

3.3.5 If construction of new buildings is required within the trees RPA it may be possible to employ special foundation design such as mini/micro pile and suspended beam or a cantilevered foundation.

3.3.6 Construction of hard surfaces, for drives and paths, 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.

3.3.7 The design of the new development should consider tree crown positions in relation to any new dwellings. The dappled shade of a tree is more pleasant than the deep shadow of a building, and some shade from trees may be beneficial. In particular, deciduous trees give shade in summer but allow access to sunlight in winter. Whilst either shade or sunlight might be desirable, depending on the potential use of the area affected, the design should avoid unreasonable obstruction of light and should give adequate provision for future tree growth.

3.4 Protection of the Retained Trees

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

3.4.2 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



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

2nd July 2018

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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 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 Ricky Nos BSc *(Hons),* FdSc *(Arboriculture), TechArborA.*

Ricky is a trained arborist with 10 years of experience in the private and local authority sectors, taking in all aspects of arboricultural work. He has a Foundation Degree in Arboriculture and a BSc (Honours) in Outdoor Management, and is a technician Member of the Arboricultural Association. His main work consists of tree surveys for development projects, involving tree inspections 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.

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*	*Physiological*	*Structural*	*Life Expectancy*	*Amenity*	*Category*	*Works*
T1	Lime	*Tilia x europaea*	Mature	22	1	560	No	2	3.5	5	6	2.5	No visual defects	Single stemmed. Vertical. Epicormic growths	Minor deadwood	Dense epicormic growths at base. Sign nailed to southern side of stem at 2m.	Good	Good	>40 yrs	High	**B**	No works required in current site context
T2	Lime	*Tilia x europaea*	Mature	22	1	550	No	2	2	2.5	5.5	5.5	No visual defects	Single stemmed. Vertical. Epicormic growths	Minor deadwood. Bark damage.	Two co-dominant main stems at 3.5m approx.	Good	Fair	>40 yrs	High	**B**	No works required in current site context
T3	Yew	*Taxus baccata*	Mature	15	1	910	No	1.5	5.5	5	5	5.5	No visual defects	Single stemmed. Vertical. Old pruning wounds. Stubs. Tight unions	Minor dieback. Minor deadwood. Snapped/ hanging branches		Fair	Fair	>40 yrs	High	**B**	No works required in current site context
T4	Hawthorn	*Crataegus monogyna*	Early-mature	4	1	220	No	1.5	0.5	1.5	3.5	1	No visual defects	Single stemmed. Significant lean south. Stubs. Ivy covered. Tight unions	Minor dieback. Moderate deadwood		Fair	Fair	10 to 20 yrs	Low	**C**	Recommended to remove deadwood overhanging footpath and road regardless of development
T5	Hawthorn	*Crataegus monogyna*	Early-mature	8	2	160, 120	No	2	0.5	0.5	3.5	3	No visual defects	Twin stemmed at 1m. Slight lean south. Epicormic growths. Old pruning wounds. Stubs. Bark damage. Minor cavities. Tight union. Minor decay	Minor deadwood		Fair	Fair	10 to 20 yrs	Low	**C**	No works required in current site context

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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*	*Physiological*	*Structural*	*Life Expectancy*	*Amenity*	*Category*	*Works*
T6	Ash	*Fraxinus excelsior*	Semi-mature	16	1	180	No	4	1.5	1.5	3.5	2	No visual defects	Single stemmed. Vertical. Stubs. Bark damage	Minor dieback. Minor deadwood	Wire fence previosuly wrapped around stem at 1m.	Fair	Fair	10 to 20 yrs	Low	**C**	No works required in current site context
G7	Willow. Laburnum. Ash. Maple. Oak.	*Salix sp. Laburnum sp. Fraxinus sp. Acer sp. Quercus sp.*	Semi-mature	15	10+	150	No	2	See plan				No visual defects	Single and Multiple stemmed. Vertical. Slight lean. Bark damage	Minor deadwood	Boundary group of semi mature stems.	Fair	Fair	10 to 20 yrs	Moderate	**C**	Recommended to crown lift to 3m over footpath regardless of development
T8	Oak	*Quercus robur*	Mature	16	1	1130	No	4	7	7	12	5	No visual defects	Single stemmed. Vertical. Ivy covered	Minor dieback. Moderate deadwood. Snapped/ hanging branches. Bark damage	Ivy prevented detailed inspection	Fair	Fair	>40 yrs	High	**A**	Recommended to remove deadwood overhanging footpath and road regardless of development
T9	Sycamore	*Acer pseudoplatanus*	Semi-mature	13	1	240	No	3	7	2.5	0.5	3.5	No visual defects	Single stemmed. Slight lean north. Ivy covered	Normal	Ivy prevented accurate stem measurement	Good	Good	20 to 40 yrs	Moderate	**C**	No works required in current site context
T10	Ash	*Fraxinus excelsior*	Semi-mature	18	1	260	No	12	2.5	3.5	2	3.5	No visual defects	Single stemmed. Vertical	Minor dieback. Minor deadwood		Fair	Good	20 to 40 yrs	Moderate	**C**	No works required in current site context
T11	Ash	*Fraxinus excelsior*	Semi-mature	10	2	120, 60	No	3	4.5	1	2	2	No visual defects	Twin stemmed. at 0.5m. Slight lean north. Epicormic growths. Ivy covered	25% dead/ absent. Small/ sparse. Moderate dieback. Minor deadwood		Poor	Fair	<10 yrs	Low	**C**	No works required in current site context

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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*	*Physiological*	*Structural*	*Life Expectancy*	*Amenity*	*Category*	*Works*
T12	Hawthorn	*Crataegus monogyna*	Mature	8	1	270	No	2	5	4	2	2.5	No visual defects	Single stemmed. Significant lean north east. Epicormic growths. Stubs. Bark damage. Tight unions	Minor deadwood		Fair	Fair	10 to 20 yrs	Low	**C**	No works required in current site context
T13	Sycamore	*Acer pseudoplatanus*	Mature	17	1	920	No	3	8.5	8.5	10	8	No visual defects	Single stemmed. Slight lean. Ivy covered. Major cavity. Moderate decay. Old pruning wounds	Minor deadwood	Large open cavity from old pruning wound on south eastern side of main stem at 1m, occluding well but decay within. Ivy prevented accurate stem measurement.	Good	Fair	>40 yrs	High	**B**	Recommended to remove deadwood overhanging footpath and road regardless of development
T14	Ash	*Fraxinus excelsior*	Semi-mature	13	1	250	No	2	8.5	4.5	0.5	2	No visual defects	Single stemmed. Significant lean north	Minor deadwood		Fair	Good	20 to 40 yrs	Moderate	**C**	No works required in current site context
T15	Holly	*Ilex aquifolium*	Semi-mature	6	1	140	No	0.5	2.5	2.5	2.5	2.5	No visual defects	Single stemmed. Vertical	Normal	Crown has likely previously snapped out at 2m	Good	Good	20 to 40 yrs	Low	**C**	No works required in current site context

	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*	*Physiological*	*Structural*	*Life Expectancy*	*Amenity*	*Category*	*Works*
T16	Sycamore	*Acer pseudoplatanus*	Mature	18	1	960	No	2	8	9.5	11	8	Decay	Single stemmed. Vertical. Ivy covered. Major cavity. Major decay	Minor deadwood. Ivy covered	Voids at base to northern and western side of main stem. Stem is hollow at base with decay. Ivy prevented detailed inpection and accurate stem measurement.	Fair	Poor	10 to 20 yrs	High	**B**	Recommended to remove Ivy and to deadwood overhanging footpath and road at the least. Formal risk assessment advised.
T17	Holly	*Ilex aquifolium*	Semi-mature	10	8	120	No	0.5	3.5	3.5	3	2.5	No visual defects	Multiple stemmed at base. Vertical	Normal		Good	Good	20 to 40 yrs	Moderate	**C**	No works required in current site context
T18	Cherry	*Prunus sp.*	Semi-mature	10	1	180	No	3	3	3	3	3	No visual defects	Single stemmed. Vertical	Minor deadwood. Small / sparse		Fair	Fair	10 to 20 yrs	Low	**C**	No works required in current site context
T19	Ash	*Fraxinus excelsior*	Semi-mature	15	1	150	No	0.5	6.5	3.2	0.5	2.5	No visual defects	Single stemmed. Significant lean north	Minor deadwood		Fair	Good	20 to 40 yrs	Moderate	**C**	No works required in current site context
T20	Sycamore	*Acer pseudoplatanus*	Mature	18	1	550	No	5	6.5	6	6.5	8	No visual defects	Single stemmed. Slight lean. Old pruning wounds	Moderate deadwood	Significant deadwood over road. Ivy prevented accurate stem measurement.	Fair	Fair	>40 yrs	High	**B**	Recommended to remove deadwood overhanging footpath and road regardless of development

	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*	*Physiological*	*Structural*	*Life Expectancy*	*Amenity*	*Category*	*Works*
T21	Cherry	*Prunus sp.*	Early-mature	15	1	230	No	3	5	2	5	5	No visual defects	Single stemmed. Vertical	Minor deadwood		Fair	Good	10 to 20 yrs	Moderate	**C**	No works required in current site context
T22	Holly	*Ilex aquifolium*	Early-mature	14	3	220, 100, 240	No	1	3	2.5	3	2	No visual defects	Multiple stemmed at base. Vertical	Minor deadwood		Good	Good	20 to 40 yrs	Moderate	**C**	No works required in current site context
T23	Hawthorn	*Crataegus monogyna*	Early-mature	10	4	110, 160, 240, 150	No	1.5	4.5	3.5	5	2.5	No visual defects	Multiple stemmed at base. Vertical. Ivy covered. Tight unions. Bark damage	Minor deadwood		Fair	Fair	20 to 40 yrs	Moderate	**C**	No works required in current site context
T24	Holly	*Ilex aquifolium*	Early-mature	15	5	160, 180, 180, 170, 150	No	1	4.5	3	4.5	3.5	No visual defects	Multiple stemmed at base. Vertical. Tight unions	Minor deadwood		Fair	Good	20 to 40 yrs	Moderate	**C**	No works required in current site context
T25	Hawthorn	*Crataegus monogyna*	Early-mature	9	2	230, 90	No	6	2.5	2	1.5	1.5	No visual defects	Twin stemmed at base. Vertical. Stubs. Bark damage. Tight unions	Small/ sparse. Minor deadwood		Fair	Fair	10 to 20 yrs	Low	**C**	No works required in current site context
T26	Hawthorn	*Crataegus monogyna*	Early-mature	9	3	100, 110, 130	No	3	3	3.5	2	1.5	No visual defects	Multiple stemmed at 1m. Vertical. Stubs. Ivy covered. Bark damage. Tight unions	Minor deadwood		Good	Good	20 to 40 yrs	Low	**C**	No works required in current site context

	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*	*Physiological*	*Structural*	*Life Expectancy*	*Amenity*	*Category*	*Works*
T27	Holly	*Ilex aquifolium*	Early-mature	10	1	290	No	2	2	3	4.5	3	No visual defects	Single stemmed. Slight lean south. Stubs. Bark damage. Minor cavities. Minor decay	Normal		Good	Fair	>40 yrs	Moderate	**C**	No works required in current site context
T28	Lime	*Tilia x europaea*	Mature	20	1	500	Yes	2	2	6	6	3	Limited access around base	Single stemmed. Vertical. Epicormic growths	Minor deadwood	Dense epicormic growth prevented detailed inspection and accurate stem measurement	Fair	Fair	>40 yrs	Moderate	**B**	No works required in current site context
T29	Service	*Sorbus sp.*	Mature	22	1	550	No	2	2	6.5	1.5	0.5	No visual defects	Single stemmed. Vertical. Ivy covered	Minor deadwood. Ivy covered	Ivy prevented detailed inspection and accurate stem measurement	Good	Good	>40 yrs	Moderate	**B**	No works required in current site context
T30	Horse Chestnut	*Aesculus x carnea*	Early-mature	18	1	370	No	3	3	6	2	1.5	No visual defects	Single stemmed. Slight lean. Ivy covered	Minor deadwood	Ivy prevented detailed inspection	Fair	Fair	>40 yrs	Moderate	**C**	No works required in current site context
T31	Beech	*Fagus sylvatica*	Mature	21	1	500	No		2	7.5	3	5	No visual defects	Single stemmed. Slight lean	Minor deadwood	Significant bark damage at base to south and west but no obvious associated decay. Two co-dominant main stems at 3m.	Fair	Fair	>40 yrs	Moderate	**B**	No works required in current site context

	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*	*Physiological*	*Structural*	*Life Expectancy*	*Amenity*	*Category*	*Works*
T32	Horse Chestnut	*Aesculus hippocastanum*	Mature	20	1	680	No	1	4.5	6.5	7.5	5	No visual defects	Single stemmed. Vertical. Bark damage. Minor cavities. Ivy covered. Minor decay. Old pruning wounds	Minor deadwood. Horse Chestnut Leaf Miner symptoms	Large old pruning wound moderate limb previously removed at 3m on southern side of main stem.	Good	Good	>40 yrs	Moderate	**B**	No works required in current site context
T33	Beech	*Fagus sylvatica 'Purpurea'*	Early-mature	18	1	290	No	2	3.5	7	2.5	4	No visual defects	Single stemmed. Vertical. Bark damage. Minor cavities. Minor decay	Minor deadwood		Fair	Fair	20 to 40 yrs	Moderate	**B**	No works required in current site context
T34	Ash	*Fraxinus excelsior*	Early-mature	20	1	400	Yes	8	3	1	6	8	Limited access around base	Single stemmed. Slight lean	Minor deadwood	Situated in adjacent land, no access	Fair	Fair	>40 yrs	Moderate	**B**	No works required in current site context
T35	Ash	*Fraxinus excelsior*	Early-mature	20	1	400	Yes	10	3	0.5	3	6	Limited access around base	Single stemmed. Slight lean	Minor deadwood	Situated in adjacent land, no access	Fair	Fair	>40 yrs	Moderate	**B**	No works required in current site context
T36	Pine	*Pinus sylvestris*	Mature	20	1	550	Yes	12	6	6	6	6	Limited access around base	Single stemmed. Vertical	Minor deadwood	Situated in adjacent land, no access	Fair	Fair	>40 yrs	Moderate	**B**	No works required in current site context

AWA TREE CONSULTANTS

	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*	*Physiological*	*Structural*	*Life Expectancy*	*Amenity*	*Category*	*Works*
T37	Pine	*Pinus sylvestris*	Early-mature	20	1	400	Yes	15	5	3	1	1	Limited access around base	Single stemmed. Vertical	Moderate dieback. Small/ sparse. 50% dead/ absent. Minor deadwood	Situated in adjacent land, no access	Poor	Fair	10 to 20 yrs	Low	**C**	No works required in current site context
T38	Lime	*Tilia x europaea*	Mature	20	1	700	Yes	2	4	2.5	3	3	Limited access around base	Single stemmed. Vertical. Epicormic growths	Minor deadwood	Situated in adjacent land, no access	Fair	Fair	>40 yrs	Moderate	**B**	No works required in current site context
T39	Fir	*Abies sp.*	Early-mature	15	1	430	No	1.5	3	3.5	3.5	2.5	No visual defects	Single stemmed. Vertical. Ivy covered	Minor dieback. Minor deadwood		Fair	Good	20 to 40 yrs	Moderate	**B**	No works required in current site context
T40	Gum	*Eucalyptus gunnii*	Early-mature	20	1	520	No	2	4.5	0.5	6.5	5.5	No visual defects	Single stemmed. Significant lean south west. Bark damage. Ivy covered	Minor dieback. Minor deadwood	Ivy prevented detailed inspection	Fair	Fair	>40 yrs	Moderate	**B**	No works required in current site context
T41	Cypress	*Cupressus sp.*	Early-mature	13	2	90, 280	No	1.5	1.5	1.5	1.5	1.5	No visual defects	Twin stemmed at base. Vertical	Normal		Good	Good	>40 yrs	Low	**C**	No works required in current site context
T42	Fir	*Abies sp.*	Early-mature	19	1	330	No	2	3	4.5	4	2.5	No visual defects	Single stemmed. Vertical. Stubs	Minor dieback. Minor deadwood		Fair	Good	>40 yrs	Moderate	**B**	No works required in current site context

	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*	*Physiological*	*Structural*	*Life Expectancy*	*Amenity*	*Category*	*Works*
T43	Yew	*Taxus baccata*	Semi-mature	6	1	210	No	2	2.5	2	2.5	3	No visual defects	Single stemmed. Slight lean. Epicormic growths. Old pruning wounds	Minor deadwood. Small/ sparse	Previously 'topped' at 3m	Fair	Fair	20 to 40 yrs	Low	**C**	No works required in current site context
T44	Oak	*Quercus robur*	Mature	22	1	1150	No	2	11	10	11	8	Exposed roots. Mower damage	Single stemmed. Vertical	Moderate deadwood. Snapped/ hanging branches. Bark damage		Good	Good	>40 yrs	Moderate	**A**	No works required in current site context
T45	Ash	*Fraxinus excelsior*	Mature	16	1	1100	No	1.5	7	7.5	7	7	No visual defects	Major cavities. Major decay. Bark damage. Old pruning wounds. Stubs. Epicormic growths	Small/ sparse. 50% dead/ absent. Cavities. Old pruning wounds. Decay	Large old ash Numeorus large cavities with major decay. Lots of reaction growth around stem base. Numerous decayed large stubs and snapouts in crown. Previously 'topped' at 10m approx. and reduced. Unsuitable for retention near development in current condition.	Fair	Poor	>40 yrs	Moderate	**C**	Remove *or* Heavily prune to retain habitat value in the short term
T46	Lime	*Tilia x europaea*	Early-mature	18	1	500	No	1	4	4.5	4.5	4.5	No visual defects	Single stemmed. Vertical	Minor deadwood		Good	Good	>40 yrs	Moderate	**B**	No works required in current site context

AWA TREE CONSULTANTS

	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*	*Physiological*	*Structural*	*Life Expectancy*	*Amenity*	*Category*	*Works*
T47	Ash	*Fraxinus excelsior*	Mature	19	1	990	No	4	3.5	7	5	9	No visual defects	Single stemmed. Vertical. Epicormic growths. Bark damage. Major cavities. Major decay	50% dead/ absent. Small/ sparse. Moderate dieback. Moderate deadwood. Snapped/ hanging branches. Decay. Bark damage. Cavities. Old pruning wounds	Similar to T45 but hasn't heen topped. Numeorus large cavities with major decay. Lots of reaction growth around stem base. Numerous decayed large stubs and snapouts in crown. Unsuitable for retention near development in current condition.	Fair	Poor	>40 yrs	Moderate	**U**	Remove *or* Heavily prune to retain habitat value in the short term
T48	Lime	*Tilia x europaea*	Early-mature	20	1	480	No	1.5	3.5	4.5	2	3.5	No visual defects	Single stemmed. Vertical. Epicormic growths	Minor deadwood		Good	Good	>40 yrs	Moderate	**B**	No works required in current site context
T49	Lime	*Tilia x europaea*	Early-mature	21	1	490	No	2	3	6	2	3	No visual defects	Single stemmed. Vertical. Epicormic growths	Minor deadwood		Good	Good	>40 yrs	Moderate	**B**	No works required in current site context
T50	Lime	*Tilia x europaea*	Mature	22	1	490	No	2	3	5	2	3	No visual defects	Single stemmed. Vertical. Epicormic growths	Minor deadwood		Good	Good	>40 yrs	Moderate	**B**	No works required in current site context

	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*	*Physiological*	*Structural*	*Life Expectancy*	*Amenity*	*Category*	*Works*
T51	Pine	*Pinus sylvestris*	Early-mature	23	1	470	No	1.5	2.5	2	1.5	4	No visual defects	Single stemmed. Vertical. Ivy covered. Stubs	Minor deadwood		Good	Good	>40 yrs	Moderate	**B**	No works required in current site context
T52	Beech	*Fagus sylvatica*	Early-mature	18	1	570	No	2	3.5	2.5	2.5	6	No visual defects	Single stemmed. Vertical. Old pruning wounds. Minor cavities. Ivy covered	Small/ sparse. Minor dieback. Minor deadwood	Suppressed. One moderate piece of deadwood to south west at 2.5m	Fair	Good	>40 yrs	Moderate	**B**	No works required in current site context
T53	Pine	*Pinus sylvestris*	Early-mature	23	1	520	No	12	3	3.5	1.5	2	No visual defects	Single stemmed. Vertical. Stubs	Minor deadwood		Good	Good	>40 yrs	Moderate	**B**	No works required in current site context
T54	Beech	*Fagus sylvatica*	Semi-mature	18	1	310	No	3	3.5	3.5	4.5	3.5	Girdled root	Single stemmed. Vertical. Old pruning wounds. Minor cavities	Minor deadwood		Good	Good	20 to 40 yrs	Moderate	**C**	No works required in current site context
T55	Pine	*Pinus sylvestris*	Semi-mature	20	1	330	No	12	2	2.5	0.5	1.5	No visual defects	Single stemmed. Vertical. Stubs. Bark damage	Minor deadwood	Limb of T56 is rubbing agaist south west of main stem at 5m causing significant bark damage	Fair	Good	>40 yrs	Moderate	**C**	No works required in current site context

AWA TREE CONSULTANTS

	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*	*Physiological*	*Structural*	*Life Expectancy*	*Amenity*	*Category*	*Works*
T56	Beech	*Fagus sylvatica*	Mature	19	1	570	No	3	4.5	2.5	2.5	2.5	No visual defects	Single stemmed. Vertical. Old pruning wounds. Bark damage. Stubs. Minor cavities	Moderate dieback. Minor deadwood	Considerable dieback to eastern crown with lots of minor deadwood. A northern branch is rubbing against neighbouring Pine T55	Poor	Fair	20 to 40 yrs	Moderate	**C**	Recommended to crown clean and remove northern branch rubbing against neighbouring tree regardless of development
T57	Beech	*Fagus sylvatica*	Dead	20	1	500	No	12	1.5	1.5	2.5	4.5	No visual defects	Single stemmed. Vertical. Bark damage. Minor cavities. Old pruning wounds. Stubs. Tight unions. Moderate decay	All dead/ absent. Major dieback. Major deadwood	Dead for some time and requires removal. Staining to western side of main stem - possible *Phytophthora sp.*	Dead	Dead	n/a	Dead	**U**	Removal required regardless of development
T58	Pine	*Pinus sylvestris*	Early-mature	22	1	400	No	15	1	1	2	1.5	No visual defects	Single stemmed. Vertical. Stubs	Minor deadwood		Fair	Good	>40 yrs	Moderate	**B**	No works required in current site context
T59	Pine	*Pinus sylvestris*	Early-mature	22	1	390	No	16	0.5	2	2.5	1	No visual defects	Single stemmed. Vertical. Stubs	Minor deadwood		Fair	Good	>40 yrs	Moderate	**B**	No works required in current site context
T60	Pine	*Pinus sylvestris*	Early-mature	22	1	510	No	10	1.5	2.5	3.5	2.5	No visual defects	Single stemmed. Vertical. Stubs	Minor deadwood		Fair	Good	>40 yrs	Moderate	**B**	No works required in current site context

	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*	*Physiological*	*Structural*	*Life Expectancy*	*Amenity*	*Category*	*Works*
T61	Pine	*Pinus sylvestris*	Early-mature	22	1	500	No	9	1	2	2.5	2	No visual defects	Single stemmed. Vertical. Stubs	Minor deadwood		Fair	Good	>40 yrs	Moderate	**B**	No works required in current site context
T62	Pine	*Pinus sylvestris*	Early-mature	22	1	460	No	2	1.5	1.5	3	2.5	No visual defects	Single stemmed. Vertical. Stubs	Minor deadwood		Fair	Good	>40 yrs	Moderate	**B**	No works required in current site context
T63	Pine	*Pinus sylvestris*	Early-mature	23	1	470	No	4	0.5	0.5	4	4.5	No visual defects	Single stemmed. Vertical. Stubs	Minor deadwood		Fair	Good	>40 yrs	Moderate	**B**	No works required in current site context
G64	Beech	*Fagus sylvatica*	Early-mature	2	10+	30	No	0	See plan				No visual defects	Single and Multiple stemmed. Old pruning wounds.	Normal	Well managed Beech hedge bordering drive. Occasional Hawthorn and Ash and Sycamore sapling. Good screening value.	Good	Good	>40 yrs	Moderate	**C**	No works required in current site context

T46
T47
T45
G64
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T42
T43
T44
Failed stem overhanging footpath
NORTH

AWA TREE CONSULTANTS

Appendix 5: Tree Constraints Plan

Somerlees, Lane Head Road, Cawthorne
Ref: AWA2265

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

SCALE: 1:500 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