



ARBORICULTURAL REPORT & Impact Assessment to BS 5837:2012 at:

***17 Willowbrook Close,
Darton,
Barnsley,
S75 5PX***

Prepared for: *White Agus*

Date: *June 2023*

Reference: AWA5503



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1. Introduction

1.1 Instructions and Brief

- 1.1.1 We have been instructed by White Agus 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 2023.
- 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 tree positions were plotted on an Ordnance Survey map base-layer 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, Principal and Director of AWA Tree Consultants Ltd. The tree survey data collection was carried out by Sophie Beckerman, BA (Hons), Level 4 Diploma (Arb), Arboriculturist at AWA Tree Consultants Ltd.
- 1.2.6 Full qualifications and experience are included within **Appendix 1**. Explanatory details regarding the survey methodology are included within **Appendix 2**. A full explanation of the tree data can be found at **Appendix 3**. Full details of all the trees surveyed are found in **Appendix 4**. For tree locations please refer to the Tree Constraints Plan at **Appendix 5** and for 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 Willowbrook Close in Darton, Barnsley.
- 2.1.2 The site is currently a residential property comprising a bungalow, a garage and driveway and a lawned area.
- 2.1.3 The approximate area of the survey is highlighted in the (2022 Google Earth) image below:



3. The Trees

3.1 Legal

- 3.1.1 The following advice is for guidance purposes only. Some trees are protected by legislation, and it is essential that the legal status of trees is established prior to carrying out works to them. Unauthorised work to protected trees could lead to prosecution, resulting in enforcement action such as fines or a criminal record. Tree Preservation Orders, Conservation Areas, Planning Conditions, Felling Licences or Restrictive Covenants legally protect many trees in the UK.
- 3.1.2 An online search was undertaken with Barnsley Metropolitan Borough Council on 19/06/23 to check whether any trees at the site are protected by a Tree Preservation Order or are located within a Conservation Area. Trees at the site are protected by a TPO and as such are legally protected (Ref: G2/11). The trees covered by the TPO are likely to be the Birch trees T1 to T8 near the northern boundary. The site is not situated within a Conservation Area.
- 3.1.3 The accessed map image from Barnsley Metropolitan Borough Council is detailed below:



- 3.1.4 Before carrying out any works to protected trees the permission of the local planning authority is required. There are large potential penalties for illegally carrying out work to protected trees. Statutory permission is not required for the removal of deadwood.
- 3.1.5 The Multi-Agency Geographical Information for the Countryside (MAGIC) website was used to search for areas of ancient woodlands listed on the Ancient Woodland (DEFRA 2021), and a check for catalogued Ancient and Veteran trees using the woodland trust ancient tree inventory (Woodland

Trust 2021).

- 3.1.6 It was confirmed that there are no designated ancient woodlands or veteran trees within the survey area.
- 3.1.7 Trees provide a wide range of habitats for many species, some of which are legally protected such as bats, nesting birds, badgers and dormice. It is essential that appropriate care is taken to ensure that this legislation is not contravened.
- 3.1.8 When appointing a tree surgeon, only properly qualified and experienced companies should be used, who have adequate Public Liability and Employer's Liability Insurance.
- 3.1.9 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 11 items of woody vegetation, comprised of 9 individual trees and 2 tree groups or hedges.
- 3.2.2 Of the surveyed trees: 10 trees are retention category 'C', and 1 tree is in retention category B. (Explanatory details regarding the retention categories are included at Appendix 3).
- 3.2.3 Full details of the surveyed trees, tree groups and hedges are provided in the attached tree data schedule at Appendix 4. General comments are provided below:
- 3.2.4 The significant tree cover consists mainly of Birch trees near the northern boundary. Two of which are on site (T1 and T4) and the rest are in the adjacent property. Beyond the eastern boundary is a large Ash (T10).
- 3.2.5 While the Birch trees are only of low individual value, collectively they provide moderate visual amenity and provide screening from the adjacent property.
- 3.2.6 The ground level within the site, to the south of the Birch T1 to T8, is lower than the base of the tree stems, by up to a depth of 1.5 m. The ground level changes are within 0.5 - 1 m of the stems. It is unclear when the ground level changes occurred, yet there is the possibility of associated root severance and damage. While most of the Birch had crowns of fair or good vigour, root damage and loss can cause the decline of the tree condition in the long term, and root severance close to the stem can lead to instability. Due to this, the condition of these trees should be monitored in the future.

- 3.2.7 G9 is a linear boundary group of semi-mature Hazel and Hawthorn, providing good habitat and screening from adjacent properties.
- 3.2.8 A mature Ash, T10, is situated to the east of the site, beyond the boundary fence. This tree is prominent throughout the site and surrounding area and provides a good level of amenity value. This tree is not currently showing any sign of Chalara or Ash Dieback Disease. However, many Ash trees in the wider region are being impacted this, and once a tree is infected, the disease is usually fatal, either directly or indirectly. While this tree may continue to provide landscape and wildlife benefits for some time, its long-term prospects are likely to be limited as a result of Ash dieback.
- 3.2.9 In many cases the trees were inaccessible (as detailed in Appendix 4). In such cases measurements were estimated and the condition values are indicative only.
- 3.2.10 The tree Root Protection Area (RPA) 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 root's actual morphology and disposition. However, detailed modifications to the shape of the RPA would largely be based on conjecture and so have been avoided.
- 3.2.11 Some lower value tree, hedge and shrub groups do not have RPAs detailed on tree plans. The detailed extent and spread of these low value groups, in conjunction with the tree schedule, is sufficient to assess the associated potential constraints.

3.3 Photographs

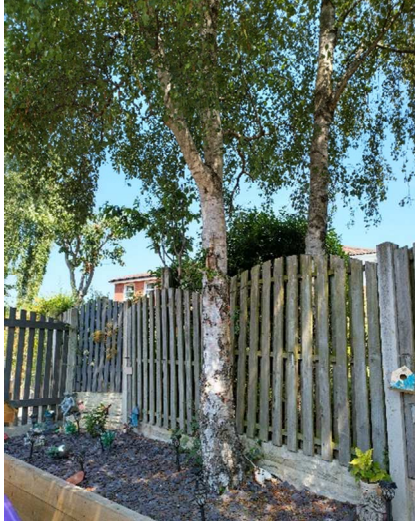


Photo 1: T1 from south



Photo 2: T1 and T4 from south

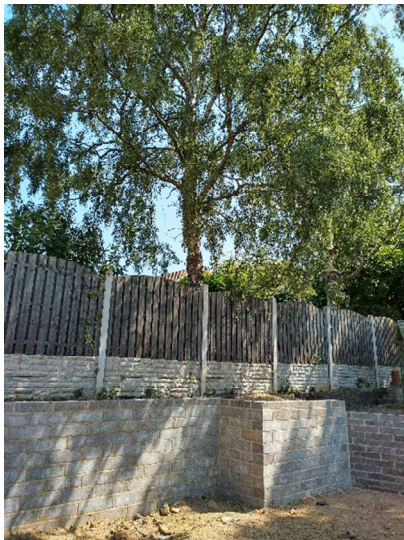


Photo 3: T7 and T8 from west.

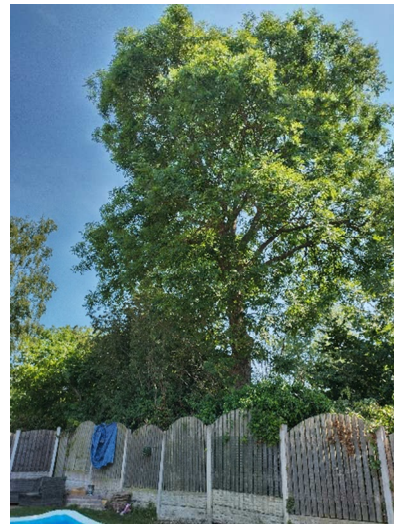


Photo 4: T10 from southwest

4. Arboricultural Impact Assessment

4.1 Proposed New Development

- 4.1.1 It is proposed to build a side extension on the existing property. 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 or pruning to facilitate the new development.

4.3 Indirect Impacts

- 4.3.1 The tree Root Protection Area (RPA) detailed on the Tree Plans at Appendices 5 and 6, 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 T7. Construction within the RPA can have negative impacts on tree roots. However, the encroachment is very minor, and due to ground level changes, the detailed RPA for these trees is likely to be an exaggerated representation of the trees actual rooting area. As such, it is unlikely that significant roots will be within these areas and the retained tree should remain largely unaffected by the works, provided care is taken during construction.
- 4.3.3 The design of the new development has considered the trees crown position in relation to the dwelling. Some shade from trees may be beneficial. In particular, deciduous trees give shade in summer but allow access to sunlight in winter. However, the design proposals avoid excessive shading, and give adequate provision for future tree growth.
- 4.3.4 The buildability of the proposed development has been assessed in terms of access, adequate working space and provision for the storage of materials, including topsoil, in relation to the trees.

4.4 Suitable Mitigation

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

4.5 Protection of the Retained Trees

- 4.5.1 The retained trees may require protection by fencing in accordance with BS 5837: 2012, during the development phase.
- 4.5.2 If required by the Local Planning Authority, an associated Arboricultural Method Statement, detailing protective fencing specifications and construction methods close to the retained trees can be provided.

5. Signature

I trust this report provides all the required information.

Signed



.....

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

19th June 2023

**AWA Tree Consultants Limited
Union Forge
27 Mowbray Street
Sheffield
S3 8EN**

www.awatrees.com



Institute of
Chartered Foresters
Registered Consultant

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 Principal 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 he 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. Adam has also undertaken locum Tree Officer work for several local authorities.

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

James has a BSc (Hons) in Arboriculture, attaining first class honours, as well as being awarded the Institute of Chartered Foresters student award. He is a Professional Member of the Arboricultural Association, an Associate of the Institute of Chartered Foresters, and he is working towards becoming a Chartered Arboriculturist. James joined AWA in 2016, he has several years' experience as an Arboricultural Consultant, he previously worked in Europe's largest container tree nursery and he has experience of local authority Tree Officer work.

Dr Felicity Stout, PhD, MA, BA (Hons), Cert Ed Forestry, TechArborA, PTI (Lantra)

Felicity has worked in the tree care profession for the last 10 years. She has a Certificate in Higher Education in Forestry, with a focus on Urban Forestry. She has practical arboricultural contractor experience and is a qualified and experienced social forestry practitioner. Felicity has a PhD in History, with a particular interest in the history of woodland and tree management and she has work published in The Arboricultural Journal on this subject. As well as working at AWA Felicity is the Tree Conservation Officer for the Peak District National Park Authority.

Mr James Godfrey, BA (Hons), Dip Forestry and Arboriculture Level 4, Cert Arb L3, TechArborA, QTRA Registered

James has extensive arboricultural experience working as a team leader within the public and private sector. By achieving a Distinction Star in the Extended Diploma in Forestry and Arboriculture, James was able to use his knowledge to inform and carry out appropriate maintenance that ensured the long term wellbeing of trees across the UK. During his time at Darlington Borough Council, James provided on site assessment and the management of the remedial works required to ensure safe and suitable retention of trees that provide a multitude of benefits to the urban environment. Currently, James is completing a Foundation Degree in Arboriculture and Tree Management, while working at AWA.

Mr Joe Thomas, MSci Biology, Award L4 Arboriculture, TechArborA

Joe achieved a first class degree in biology with an integrated Masters (MSci) from the University of Sheffield. Additionally, he has a Level 4 Award in Arboriculture. Joe joined AWA in 2022 after an Urban Forestry role with the Sheffield and Rotherham Wildlife Trust and Sheffield City Council, where he gained a variety of experience in different aspects of the arboriculture sector.

Mr James Boyle, HND Level 5 Arboriculture and Urban Forestry, Dip Arboriculture Level 4, TechArborA

Jim joined AWA in 2022, after having worked within the tree care profession for several years, alongside studying at college and university. During this time, he gained a wealth of experience and several professional and practical NPTC qualifications in the tree care industry. Jim has studied Arboriculture and Urban Forestry at Merrist Wood College in Surrey, Plumpton College in Sussex and University of Highlands and Islands in the Scottish Highlands, where he achieved a distinction in the Higher National Diploma Level 5.

Miss Lucy Garbutt, MSc Animal Behaviour, BSc (Hons) Biology, CIEEM membership

Lucy graduated with a masters degree in Animal Behaviour from the UK's highest rated university, St Andrews of Scotland, immediately following the completion of her BSc degree in Biology from Lancaster University. Lucy has experience in botany and plant science and moved into arboriculture after previous experience of protected species and botanical surveys with a large environmental consulting company.

Appendix 2: Survey Methodology and Limitations

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 BS 5837:2012 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 in 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 unsuitable for retention. These trees are in such a condition that any existing value would be lost within 10 years.

Tree Species				Measurements			Crown (m)				Tree Condition								Value		Management		
Tree ID	Common Name	Latin Name	Maturity	Height (m)	Stems	Stem Diameter (mm)	Estimated	Crown height	N	E	S	W	Roots	Stem	Crown	Comments	Physiological	Structural	Life Expectancy	Amenity	Category	Works	
	T1	Silver Birch	Betula pendula	Semi-mature	8	1	240	No	2	3	2	4	3.5	Ground level lower to south of stem	Single stemmed. Vertical. Pruning wounds - healing poorly with some decay. Stubs. Minor cavities	Minor deadwood. Overhanging adjacent land	In raised area. Retaining wall 0.5 m to south.	Good	Fair	10 to 20 yrs	Moderate	C	No works required to facilitate development
	T2	Silver Birch	Betula pendula	Semi-mature	10	1	200	Yes	2	3	3	1	1	Limited access around base. Ground level lower to south of stem	Single stemmed. Vertical. Stubs. Old pruning wounds. Minor cavities	Sharing crown with T1	Adjacent Birch. Limited access prevented detailed inspection.	Good	Fair	10 to 20 yrs	Moderate	C	No works required to facilitate development
	T3	Cherry	Prunus sp.	Young	7	1	80	Yes	2	2	0.5	0.5	0.5	Limited access around base. Ground level lower to south of stem	Single stemmed vertical	Normal	Adjacent Cherry. Limited access prevented detailed inspection.	Good	Fair	10 to 20 yrs	Low	C	No works required to facilitate development
	T4	Silver Birch	Betula pendula	Semi-mature	10	1	290	No	2	4.5	4	3.5	3.5	Ground level lower to south of stem	Single stemmed. Vertical. Old pruning wounds. Stubs. Bark damage. Tight union. Twin stemmed at 2m.	Overhanging adjacent land. Normal. Minor deadwood	Retaining wall 0.5 m to south. Possible root damage. Bark damage to lower western stem. Codominant stems at 1.8 m	Fair	Fair	10 to 20 yrs	Moderate	C	No works required to facilitate development
	T5	Apple	Malus sp.	Young	4	2	90, 50	Yes	1	3.5	3.5	1	0.5	Limited access around base. Ground level lower to south of stem	Twin stemmed at 0.5m.	Normal	Adjacent Apple. Limited access prevented detailed inspection.	Good	Good	20 to 40 yrs	Low	C	No works required to facilitate development
	G6	Cherry, Buddleia, Mahonia	Prunus sp, Buddleia daqvidii, Mhonia sp.	Semi-mature	4	6	70	Yes	4	See plans				Limited access around base.	Multi-stemmed	Normal	Small group of shrubs including Cherry Buddleia and Mahonia. Adjacent. Limited access prevented detailed inspection.	Good	Good	10 to 20 yrs	Low	C	No works required to facilitate development

Tree Species				Measurements			Crown (m)				Tree Condition							Value		Management		
Tree ID	Common Name	Latin Name	Maturity	Height (m)	Stems	Stem Diameter (mm)	Estimated	Crown height	N	E	S	W					Physiological	Structural	Life Expectancy	Amenity	Category	Works
													Roots	Stem	Crown	Comments						
T7	Silver Birch	Betula pendula	Semi-mature	12	1	340	Yes	1.5	4	3.5	4	4.5	Limited access around base. Ground level lower to south of stem	Single stemmed. Vertical. Old pruning wounds. Stubs.	Normal	Adjacent Birch. Limited access prevented detailed inspection. Ground level lower immediately to south west within 0.5 m of stem, to a depth of 1.5m.	Fair	Fair	10 to 20 yrs	Moderate	C	No works required to facilitate development
T8	Silver Birch	Betula pendula	Semi-mature	10	1	300	Yes	2	3.5	3.5	3.5	3	Limited access around base. Ground level lower to south of stem	Single stemmed. Vertical. Old pruning wounds. Stubs.	Sparse. Low vigour. Old pruning wounds. Minor dieback.	Adjacent. Limited access prevented detailed inspection.	Fair	Fair	10 to 20 yrs	Moderate	C	No works required to facilitate development
G9	Hawthorn, Hazel	Crataegus monogyna, Corylus avellana	Semi-mature	5	6	70	Yes	5	See plans				Limited access around base.	Multi-stemmed.	Recent pruning works back to boundary. Ivy clad.		Good	Good	10 to 20 yrs	Low	C	No works required to facilitate development
T10	Ash	Fraxinus excelsior	Mature	18	1	600	Yes	3.5	5.5	6.5	6.5	5.5	Limited access around base.	Single stemmed. Vertical. Old pruning wounds occluded well. Stubs.	Minor deadwood. Minor dieback.	Adjacent. Limited access prevented detailed inspection. Healthy crown no sign of Ash Die Back. Small lower branches on north western side cut back to boundary.	Good	Good	20 to 40 yrs	Moderate	B	No works required to facilitate development
T11	Ash	Fraxinus excelsior	Young	6	1	100	Yes	2	1.5	1.5	1.5	1	Limited access around base.	Single stemmed. Vertical.	Normal.	Self-set Ash tree.	Good	Good	10 to 20 yrs	Low	C	No works required to facilitate development

