TREE CONSULTANTS

ARBORICULTURAL REPORT

& Impact Assessment

to **BS 5837:2012** at:

Baggerwood Farm,
Bagger Wood Road,
Thurgoland,
South Yorkshire
S35 7AX

Prepared for:
Norcroft Energy

Date: *April 2022*

Reference: *AWA3956*

Institute of Chartered Foresters
Registered Consultant

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1. Introduction

1.1 Instructions and Brief

1.1.1 We were instructed by Norcroft Energy 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 2021.

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, Principle and Director of AWA Tree Consultants Ltd. The tree survey data collection was carried out by Mr David Miller, BA (Hons), PGCE, Dip Arb L4, 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 the Tree Impacts Plan at **Appendix 6**.

2. The Site

2.1 Location and Description

2.1.1 The site is located on Bagger Wood Road, approximately 1 mile northeast of the village of Thurgoland, South Yorkshire.

2.1.2 The site comprises farmland, with the main farm buildings situated to the north of the site. The site is surrounded on all sides by farmland, except to the north, which is bordered by Bagger Wood Road, with mixed woodland beyond.

2.1.3 The approximate area of the survey is highlighted in the (2018 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 the 12th of April 2022 to check if trees at the site are protected by a Tree Preservation Order or are within a Conservation Area. As of this date no trees at the site are protected by a Tree Preservation Order or are within a Conservation Area.

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

3.1.4 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 must be ensured that this legislation is not contravened.

3.1.5 When appointing a tree surgeon, only properly qualified and experienced companies should be used, who have adequate Public Liability and Employer's Liability Insurance.

3.1.6 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 8 items of woody vegetation, comprised of 6 individual trees and 2 tree groups or hedges.

3.2.2 Of the surveyed trees: 4 trees or tree groups are retention category 'B', and 4 trees, tree groups or hedges are retention category 'C' (explanatory details regarding the retention categories are included at Appendix 3).

3.2.3 The most significant feature is a woodland group G6 situated adjacent to and overhanging the western boundary. These trees form part of a larger woodland group to the west of the site. Within this group is a species mix of varying age categories. The occasional mature Oak tree is situated throughout this group. The trees close to the east of the group were measured to inform the Root Protection Area.

3.2.4 The site's most significant tree is T4, a mature Sessile Oak situated to the south of the site. This tree is prominent throughout the site and surrounding area and provides a moderate level of amenity value. T4 has suffered periodic heavy pruning to the south-east of its crown for the purpose of allowing adjacent utility electricity cables free passage. This has resulted in a heavily unbalanced crown with 25-40% of the crown mass removed. This tree appears in reasonable physiological health, but has various structural defects including major deadwood on the westerly-most of its diverging stems, heavy pruning to the north.

3.2.5 The central areas of the site contain little of arboricultural significance, consisting of fenced grazing grassland.

3.2.6 Species diversity at the site is relatively good, with Sessile Oak, Cherry, Sycamore and Field Maple. The site's trees had a limited age diversity, but the adjacent woodland group G8 had a good age diversity with a mix of semi-mature, early-mature and mature trees.

3.2.7 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.

3.2.8 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.

3.2.9 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 Photographs


Photo 1: T4


Photo 2: T4 showing removed crown


Photo 3: G3


Photo 4: G3


Photo 5: G6


Photo 6: G6

4. Arboricultural Impact Assessment

4.1 Proposed New Development

4.1.1 It is proposed to build a new agricultural building with associated access track, landscaping and services. 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 require removal to facilitate the development, with all trees able to be retained as part of the 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.

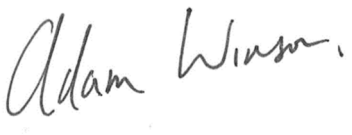
4.3.2 The proposed new agricultural building and associated landscaping encroach into the edge of the detailed RPA of retained tree T4, however, the encroachment into the detailed RPA is very minor and the retained tree should remain largely unaffected by the works provided care is taken during construction.

4.3.3 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.

5. Signature

I trust this report provides all the required information.

Signed



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

12th April 2022

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Appendices

Appendix 1: Authors Qualifications and Experience
Appendix 2: Survey Methodology and Limitations of Report
Appendix 3: Explanation of Tree Descriptions
Appendix 4: Tree Data
Appendix 5: Tree Constraints Plan
Appendix 6: Tree Impacts Plan

Appendix 1: Authors Qualifications & Experience

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

Mr James Brown *BSc (Hons) Arboriculture, MArborA, PTI (Lantra)*
James has a BSc (Hons) in Arboriculture, attaining first class honours, as well as being awarded the Institute of Chartered Forester's Student award. He is a Professional Member of the Arboricultural Association and an Associate of the Institute of Chartered Foresters. James joined AWA in 2016, after previously working 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.

Dr Felicity Stout *Ph.D, MA, BA (Hons), Cert Ed (Forestry), TechArborA, PTI (Lantra)*
Felicity has worked in the tree care profession for the last 10 years. She has a Certificate in Higher Education in Forestry, with a focus on Urban Forestry. She has practical arboricultural contractor experience and is a qualified and experienced Social Forestry practitioner. Felicity has a PhD in History, with a particular interest in the history of woodland and tree management and has published in The Arboricultural Journal on this subject.

Mr Tom Readman *FdSc Arboriculture, Cert Arb L3, Valid Tree Risk-Benefit Validator, TechArborA*
Tom joined AWA from his previous role as a tree risk surveyor with Harrogate Borough Council, where he undertook tree risk surveys at a range of sites and prescribed suitable works. Tom also has extensive previous experience as a climbing arborist. Tom achieved a Distinction in the Foundation Degree in Arboriculture, while working at AWA, and has previously achieved Distinction Star, and was recognised as the student of the year, in the Extended Diploma in Forestry and Arboriculture. Tom's work focuses on tree risk surveys and accurate tree data collection for development projects to BS 5837:2012

Mr James Godfrey *BA (Hons), Cert Arb L3, Level 4 Forestry and Arboriculture, TechArborA*
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 David Miller *BA (Hons), PGCE education, Dip Arboriculture Level 4, TechArborA*
David joined AWA after having managed his own tree care team for 8 years and gained a wealth of experience in the tree care industry. Prior to this David spent 10 years working in secondary mainstream and special education. David has also travelled worldwide, mainly trekking and running. His main work at AWA consists of tree surveys for development projects and preparing 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 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.

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 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	Sycamore	*Acer pseudoplatanus*	Young	9	2	170, 240	No	2.5	4	4.5	4.5	4	No visual defects.	Twin stemmed at base. Vertical. Old pruning wounds	Normal. Minor deadwood	Small tree in carpark with hardcore around stem.	Good	Good	>40 yrs	Low	**C**	No works required
T2	Sycamore	*Acer pseudoplatanus*	Young	8	1	210	No	2	4.5	4	4	4.5	Trenching/ excavations. Root damage/ loss to east	Single stemmed. Vertical. Bark damage	Normal. Slightly unbalanced. Minor deadwood	Young tree in car park area with hardcore up to stem.	Fair	Fair	20 to 40 yrs	Low	**C**	No works required
G3	Hawthorn, Holly	*Crataegus monogyna, Ilex aquifolium*	Mature	3	10	150	Yes	0	1.5	1.5	1.5	1.5	Boundary hedge group consisting of Hawthorn and Holly. Intermittent with mix of young and more established trees within group.				Good	Good	>40 yrs	Low	**C**	No works required
T4	Oak	*Quercus petraea*	Mature	26	1	1200	No	4.5	9	5	5	8	Decay. Soil erosion. Exposed roots. Damage to buttress roots.	Single stemmed. Twin stemmed at 3m. Vertical. Bark damage. Old pruning wounds. Tight union. Major cavities. Major decay	Crown very unbalanced. Old pruning wounds. Moderate deadwood. Unbalanced	Crown to south/ east pruned away from utility pylons. Large stubs and deadwood to north from pruning on site facing side. Major decay and deadwood in westerly stem. Remaining crown healthy.	Good	Fair	>40 yrs	Moderate	**B**	No works required
T5	Oak	*Quercus petraea*	Early-mature	15	1	400	Yes	2.5	6	6	5.5	5	No visual defects. Limited access around base	Single stemmed. Vertical	Normal. Minor deadwood	Edge tree, situated in the north east corner of woodland group.	Good	Good	>40 yrs	Moderate	**B**	No works required

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	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*
G6	Beech, Cherry, Elder, Elm, Holly, Oak.	*Fagus sp. Prunus sp. Sambucus sp. Ulmus sp. Ilex sp. Quercus sp.*	Early-mature	22	10	350	Yes	2	5	5	5	5	Adjacent woodland group of mature to early mature Oak, Cherry, with semi-mature Beech and young Elm with an understory of Holly and Elder.				Good	Good	>40 yrs	Moderate	**B**	No works required
T7	Field Maple	*Acer campestre*	Early-mature	12	2	280, 350	No	2	6	5	5	5	No visual defects. Limited access around base	Twin stemmed at 1m. Vertical. Epicormic growths.	Normal. Moderate deadwood. Snapped /hanging branches.	Adjacent tree forming end of woodland group.	Fair	Fair	10 to 20 yrs	Low	**C**	No works required
T8	Sycamore	*Acer pseudoplatanus*	Early-mature	20	2	360, 350, 320	No	4	6	6	6.5	6	No visual defects	Multiple stemmed at 1m. Vertical. Epicormic growths.	Normal. Old pruning wounds. Minor deadwood	Adjacent tree over footpath running through site. Prolific basal epicormic growth.	Good	Good	>40 yrs	Moderate	**B**	No works required

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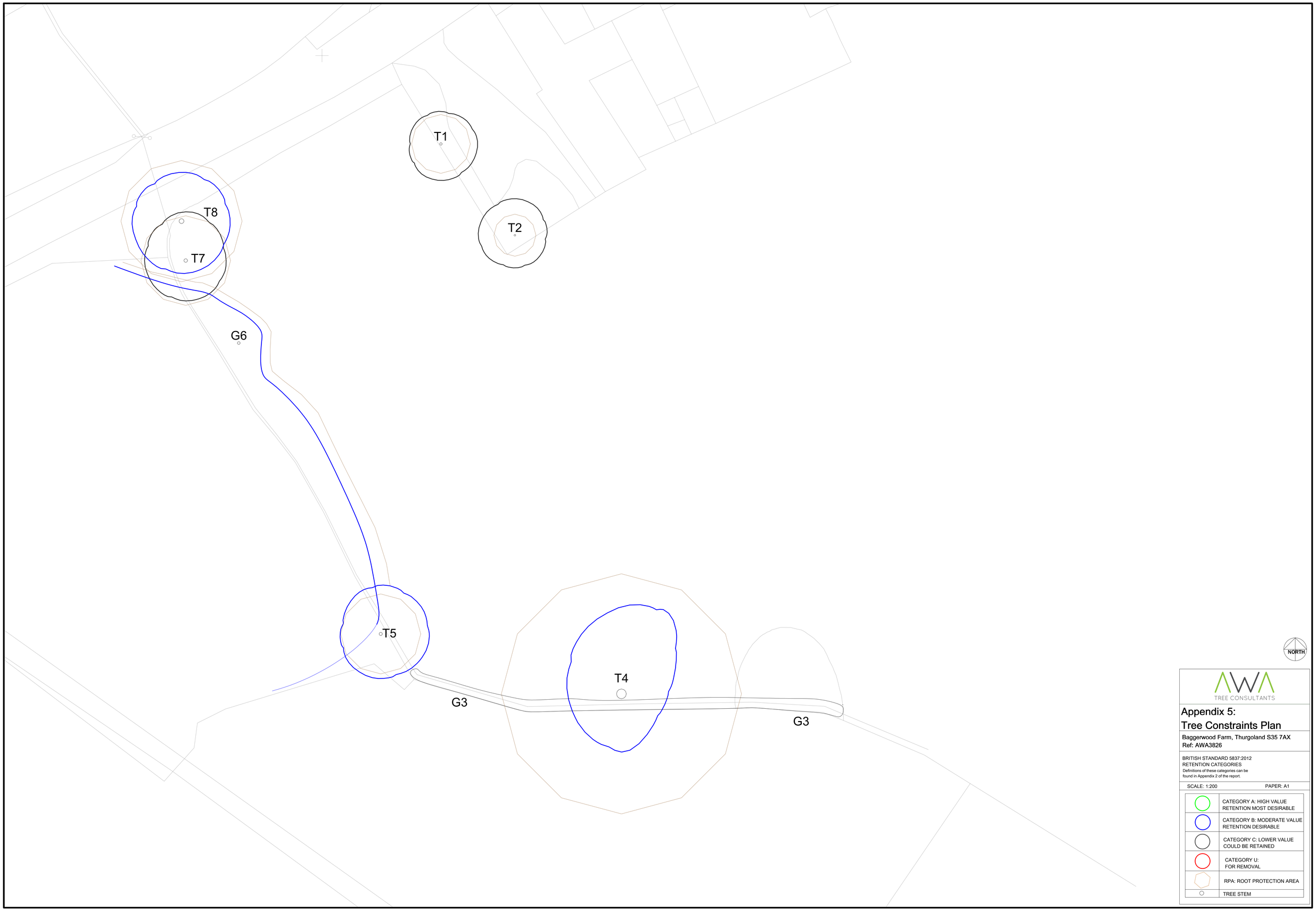

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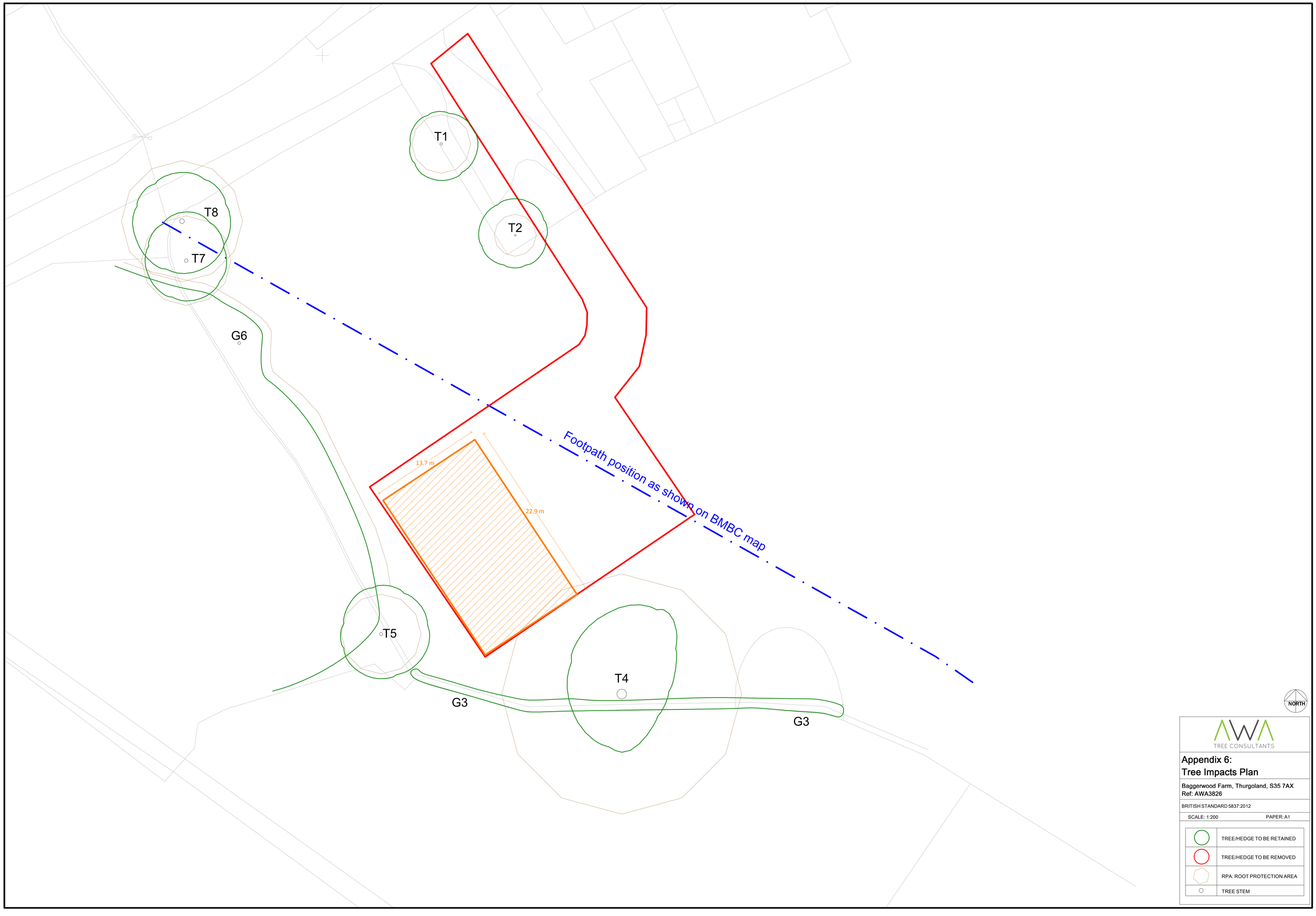
Appendix 5:
Tree Constraints Plan

Baggerwood Farm, Thurgoland S35 7AX
Ref: AWA3826

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

SCALE: 1:200 PAPER: A1

	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

Baggerwood Farm, Thurgoland, S35 7AX
Ref: AWA3826

BRITISH STANDARD 5837:2012

SCALE: 1:200 PAPER: A1

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