



ARBORICULTURAL REPORT & Impact Assessment to **BS5837:2012 at:**

Land at
Priory Farm,
Retford,
South Leverton,
DN22 0BY.

Prepared for:
Artreum Ltd

Date: *April 2021*

Reference: AWA 3731



Contents

1. Introduction.....	3
1.1 Instructions and Brief	3
1.2 Survey Details	3
2. The Site.....	4
2.1 Location and Description	4
3. The Trees.....	5
3.1 Legal	5
3.2 Tree Survey Results	5
4. Arboricultural Impact Assessment	9
4.1 Proposed New Development.....	9
4.2 Direct Impacts.....	9
4.3 Indirect Impacts	9
4.4 Protection of the Retained Trees.....	10
5. Signature	11
Appendix 1: Authors Qualifications & Experience.....	13
Appendix 2: Survey Methodology and Limitations of Report.....	14
Appendix 3: Explanation of Tree Descriptions	15
Appendix 4: Tree Data	16
Appendix 5: Tree Constraints Plan.....	17
Appendix 6: Tree Impacts Plan	18

1. Introduction

1.1 Instructions and Brief

- 1.1.1 We have been instructed by Artreum 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 April 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.
- 1.2.6 The tree survey data collection was carried out by Mr David Miller BA PGCE Dip Arb L4 and Mr James Godfrey Cert Arb L3, Level 4 Forestry and Arboriculture, TechArborA, Arboriculturists at AWA Tree Consultants Ltd.
- 1.2.7 Full qualifications and experience are included within **Appendix 1**. Explanatory details regarding the survey methodology are included within **Appendix 2**. A full explanation of the tree data can be found at **Appendix 3**. Full details of all the trees surveyed are found in **Appendix 4**. For tree locations refer to the Tree Constraints Plan at **Appendix 5** and for detail of the impacts of the new development refer to the Tree Impacts Plan at **Appendix 6**.

2. The Site

2.1 Location and Description

- 2.1.1 The site is located in South Leverton, a village and civil parish in Bassetlaw, North Nottinghamshire.
- 2.1.2 The site comprises a parcel of open land covered in hard standing and tarmac. There are remnants of building foundations and concrete bases. Beyond the North and West boundaries of the site are agricultural land in arable use. Along the East boundary is a building (in the South East corner) and a group of early mature to mature trees bounding the garden of the adjacent priory house. To the South of the site is the road from which access is gained to the site.
- 2.1.3 The approximate area of the survey is highlighted in the image below (Google Earth, 2008):



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.
- 3.1.3 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 6 items of woody vegetation, comprising 5 individual trees and 1 hedge group.
- 3.2.2 All the surveyed trees and groups are lower value retention category 'C' (explanatory details regarding the retention categories are included at Appendix 3).
- 3.2.3 The central area of the site contains nothing of arboricultural significance, generally consisting of concrete foundation, tarmac and gravel bases from previous buildings, recently demolished and associated hard surfaces.
- 3.2.4 Species diversity at the site is limited. The dominant species are Lime and Chestnut, with an understorey of Holly, Elder and Cherry Laurel shrubs beyond the Eastern boundary. The hedgerow on the West boundary is mostly comprised of Hazel, Hawthorn and Elder, with other less frequent species. The trees are generally early mature.
- 3.2.5 The significant tree cover is limited to one group beyond the Eastern boundary, T1 to T4 Lime and Chestnut. The tree cover in this area extends away from the site boundary to the East and forms a broad boundary with the neighbouring land.
- 3.2.6 The trees T1 to T4 have all been heavily pruned, removing most of the Western canopy near to the boundary fence. This work has resulted in large

pruning wounds and stubs. The work has reduced the value and long-term prospects of the trees; however, collectively the group still provides reasonable visual amenity.

- 3.2.7 Within this group there are two very heavily pruned - or topped – trees that have been reduced to standing monoliths (as detailed on the attached tree plans). Future management options for these trees includes removal or management as standing deadwood monoliths/eco poles.
- 3.2.8 The hedgerow on the western boundary is comprised predominantly of Hawthorn with occasional Elder and Hazel (G6). Historically, the hedge has been well managed through regular flailing, with a central section that appears less managed and more naturalistic. Whilst only of low arboricultural value, the hedge is in keeping with the surrounding landscape character, provide ecological value to the site and have the potential to provide screening to any development at the site.
- 3.2.9 An early mature multi stemmed conifer (T5) is situated just outside of the north boundary of the site. This tree is not note-worthy, yet it forms a useful visual screen to the nearby power station.
- 3.2.10 Some trees were covered in dense ivy or were inaccessible for inspection (as detailed in Appendix 4). In such cases measurements were estimated and the condition values are indicative only.
- 3.2.11 The tree Root Protection Area (RPA) detailed on the Tree Constraints Plan at Appendix 5 has been used as a layout design tool, to inform on the area around a tree where the protection of the roots and soil structure is treated as a priority.
- 3.2.12 Some lower value tree, hedge and shrub groups do not have RPAs detailed on tree plans. The detailed extent and spread of these low value groups, in conjunction with the tree schedule, is sufficient to assess the associated potential constraints.
- 3.2.13 The RPA for each tree has been plotted as a polygon centred on the base of the stem. Due to the presence of roads, structures, topography (and past tree management) the RPA is likely to be a simplified representation of the tree roots actual morphology and disposition. However, detailed modifications to the shape of the RPA would largely be based on conjecture and so have been avoided.

3.3 Photographs



Photo 1: G6, Looking North West.



Photo 2: T1 to T4, Looking East



Photo 3: T1 to T4, Looking South



Photo 4, T5, Looking North

4. Arboricultural Impact Assessment

4.1 Proposed New Development

4.1.1 It is proposed to build a new residential development, with access, landscaping and facilities. The development proposals have been provided by my client and inform this arboricultural impact assessment and the Tree Impacts Plan at Appendix 6.

4.2 Direct Impacts

4.2.1 From assessing the new development proposals, no trees will require removal to facilitate the proposed development, with all trees able to be retained and protected throughout the proposed development.

4.2.2 The northern section of hedge (G6) will need to be removed from the curtilage of property 3 in order to facilitate the development requirements. The remaining hedge is to be pruned back from the east. It will likely tolerate this work and if the remaining hedge is well managed it will provide good future amenity value for the planned development.

4.3 Indirect Impacts

4.3.1 The tree Root Protection Area (RPA) detailed on the Tree Plans at Appendix 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. A proposed new residential property encroaches close to the RPA of retained adjacent tree, T4. Construction within the RPA, can have negative impacts on tree roots. However, the retained tree should remain largely unaffected by the works, provided care is taken during construction.

4.3.3 Where new boundary fences are proposed within the RPA of retained trees, the encroachment into the trees' RPAs should not significantly adversely impact on the health or future condition of the trees, provided posts and panels type footings are used as opposed to strip footings, with the holes for the posts dug by hand, avoiding significant tree roots where possible.

4.3.4 The design of the new development has considered trees crown positions in relation to the proposed new dwellings and amenity space. 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.

4.3.5 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 Protection of the Retained Trees

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

4.4.2 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.

5. Signature

I trust this report provides all the required information.

Signed



.....

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

26th April 2021

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Appendices

Appendix 1: Authors Qualifications and Experience

Appendix 2: Survey Methodology and Limitations

Appendix 3: Explanation of Tree Descriptions

Appendix 4: Tree Data

Appendix 5: Tree Constraints Plan

Appendix 6: Tree Impacts Plan

Appendix 1: Authors Qualifications & Experience

Mr Adam Winson Chartered Arboriculturist, MSc, BSc (Hons), MICFor, MArborA, ACIEEM, QTRA Registered

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

Mr James Brown BSc (Hons) Arboriculture, MArborA, 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 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. 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 David Miller BA (Hons) English, PGCE education, Dip Arboriculture Level 4

David has a BA (Hons) in English and spent 10 years working in secondary mainstream and special education. Subsequently, he retrained and worked as a climbing arborist. Since 2013, David has headed up his own tree care team and has gained a wealth of experience in the tree care industry. 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.

Mr James Godfrey Cert Arb L3, Level 4 Forestry and Arboriculture, TechArborA

James has extensive arboricultural experience working as a team leader in both the public and private sector. Achieving a Distinction Star in the Extended Diploma in Forestry and Arboriculture allowed James to utilise this knowledge in order to inform the maintenance and wellbeing of trees across the UK over the course of his career. During his time at Darlington Borough Council, James was responsible for on-site assessment and advising of remedial works for council owned trees. Currently, James is completing a Foundation Degree in Arboriculture and Tree Management, while working at AWA.

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 in green on Appendix 5) = retention most desirable. These trees are of very high quality and value with a good life expectancy.

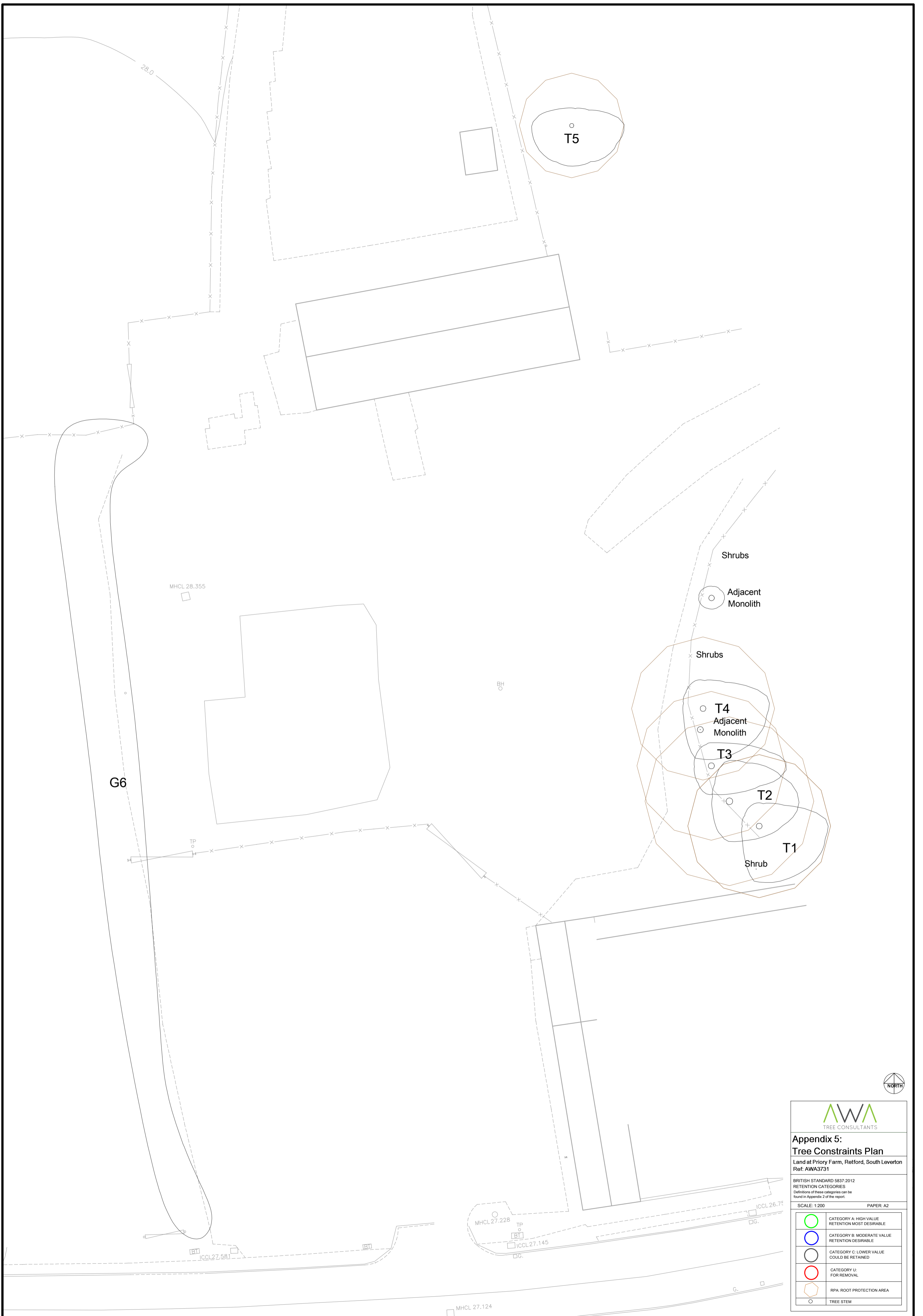
B (marked in blue on Appendix 5) = retention desirable. These trees are of good quality and value with a significant life expectancy.


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 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	Horse Chestnut	<i>Aesculus x carnea</i>	Early-mature	9	1	500	Yes	5.5	2	6	5	1.5	Ivy clad. Limited access around base	Stubs. Epicormic growths. Pruning wounds from crown lifting. Ivy covered. Old pruning wounds.	Minor deadwood. Overhanging adjacent land. Unbalanced crown to East. Ivy covered	Adjacent tree - limited access. Severe pruning to boundary. Dead stubs with decay.	Fair	Fair	20 to 40 yrs	Low	C	No works required
T2	Lime	<i>Tilia sp.</i>	Early-mature	12	1	590	Yes	4.5	3.5	6	3.5	1.5	Limited access around base. Ivy clad.	Single vertical stem, ivy covered. Multiple stemmed at 3m. Stubs and old pruning wounds.	Ivy covered. Unbalanced crown to East aspect. Minor deadwood	Adjacent tree - limited access. Severe pruning to boundary. Dead stubs with decay.	Fair	Fair	10 to 20 yrs	Low	C	No works required
T3	Horse Chestnut	<i>Aesculus x carnea</i>	Early-mature	9	1	520	Yes	2.5	2	6.5	2.5	1.5	Ivy clad. Limited access around base.	Ivy covered. Stubs. Single stemmed. Vertical	Ivy covered. Unbalanced crown to East. Minor deadwood	Adjacent tree - limited access. Pruning to boundary to West.	Fair	Poor	20 to 40 yrs	Low	C	No works required
T4	Lime	<i>Tilia sp.</i>	Early-mature	16	1	500	Yes	3	2.5	6	6	2.5	Limited access around base. Ivy clad.	Stubs. Epicormic growths. Pruning wounds from crown lifting. Ivy covered. Old pruning wounds.	Minor deadwood. Overhanging adjacent land. Unbalanced crown to East. Ivy covered	Adjacent tree - limited access. Severe pruning to boundary. Dead stubs with decay.	Fair	Fair	20 to 40 yrs	Moderate	C	No works required
T5	Leyland Cypress	<i>Cupressocyparis leylandii</i>	Early-mature	10	4	210, 190, 210, 100	No	0	1.5	4.5	3.5	3.5	No visual defects. Slope to west. .	Multiple stemmed at 1m. Stubs. Pruning wounds from crown lifting.	Minor deadwood. Normal. Crown lifted to accommodate new fence to East.	Effective screening of power stations.	Good	Good	>40 yrs	Moderate	C	No works required

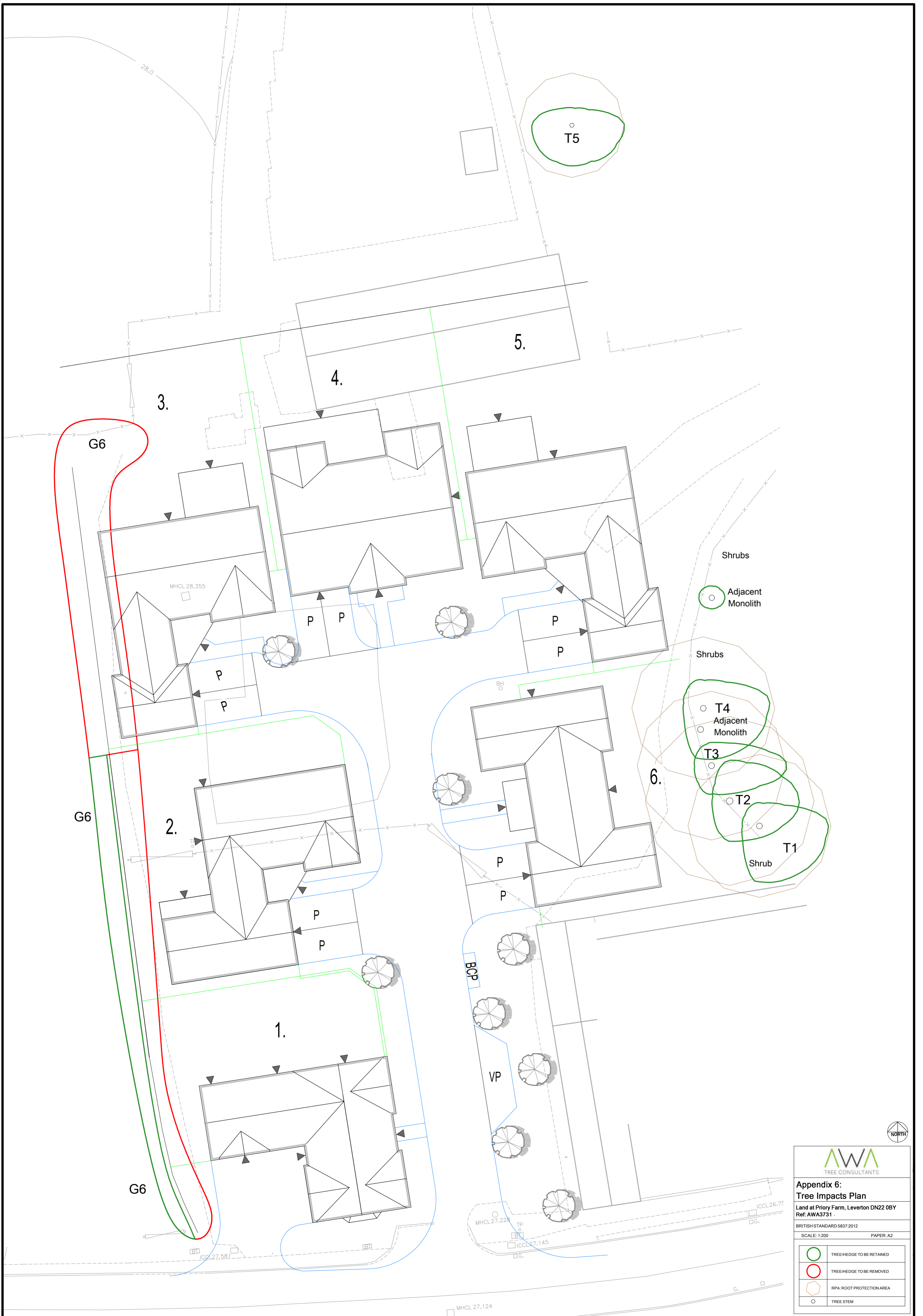
Tree Species		Measurements						Crown (m)				Tree Condition						Value		Management		
Tree ID	Common Name	Latin Name	Maturity	Height (m)	Stems	Stem Dia (mm)	Estimated	Ave Height	N	E	S	W	Roots	Stem	Crown	Comments	Physiological	Structural	Life Expectancy	Amenity	Category	Works
G6	Elder, Hazel and Hawthorn.	<i>Sambucus nigra</i> , <i>Corylus avellana</i> , <i>Crataegus monogyna</i>	Early-mature	2.5	10+	70	No	0	See plan				Managed elder, hawthorn and hazel hedge, flailed to 2.5m. Taller central section flailed to 4.5m.				Fair	Fair	20 to 40 yrs	Moderate	C	Remove northern section and prune back from east remaining section




Appendix 5:
Tree Constraints Plan
 Land at Priory Farm, Retford, South Leventon
 Ref: AWA3731

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

SCALE: 1:200	PAPER: A2
	CATEGORY A: HIGH VALUE RETENTION MOST DESIRABLE
	CATEGORY B: MODERATE VALUE RETENTION DESIRABLE
	CATEGORY C: LOWER VALUE COULD BE RETAINED
	CATEGORY U: FOR REMOVAL
	RPA: ROOT PROTECTION AREA
	TREE STEM



AWA
TREE CONSULTANTS

Appendix 6:
Tree Impacts Plan
Land at Priory Farm, Leverton DN22 0BY
Ref: AWA3731

BRITISH STANDARD 5837:2012
SCALE: 1:200 PAPER: A2

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