



ARBORICULTURAL REPORT

to BS 5837:2012 at:

*Sundown,
Tattershall Road,
Billinghay Road,
Lincoln,
Lincolnshire
LN4 4BP*

Date: *December 2020*

Reference: *AWA3518*



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1. Introduction

1.1 Instructions and Brief

- 1.1.1 We were instructed by Peter Lonsdale c/o Steven Dunn Architects 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 November 2020.
- 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 James Brown BSc (Hons) Arboriculture, MArborA, PTI (Lantra) 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**.

2. The Site

2.1 Location and Description

- 2.1.1 The site is located on Tattershall Road in Billinghay, a village and civil parish in the North Kesteven district of Lincolnshire. It comprises a small dilapidated residential property with outbuildings and garden.
- 2.1.2 The approximate area of the survey is highlighted in the (2019 Google Earth) image below:



3. The Trees

3.1 Legal

- 3.1.1 An online search was undertaken with North Kesteven District Council on the 2nd of December 2020 to check whether any trees at the site are protected by a Tree Preservation Order (TPO) or whether the site is located within a Conservation Area. As of this date no trees at the site are legally protected.
- 3.1.2 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 works are approved by planning permission). Statutory permission is not required for the removal of deadwood.
- 3.1.3 When appointing a tree surgeon, only properly qualified and experienced companies should be used, who have adequate Public Liability and Employer's Liability Insurance.
- 3.1.4 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, comprised of 4 individual trees and 2 tree groups.
- 3.2.2 Of the surveyed trees: 2 trees are retention category 'B', and 4 trees or tree groups are retention category 'C' (explanatory details regarding the retention categories are included at Appendix 3).
- 3.2.3 The significant trees are the Ash T1 and T2. The trees are situated at the site's north eastern corner, on the southern edge of a drainage ditch. There are outbuildings to the immediate south of the trees, some of which are in contact with the trees' stems. T1 is single stemmed, while T2 is multiple stemmed with a partially included bark union at its base and a minor cavity with good reaction growth at the base of its largest northern stem. Both T1 and T2 have minor deadwood and occasional minor snap-outs throughout the crown and there is a moderate snap-out in the lower western crown of T2 at approximately 2.5m from ground level. In general they are mature trees in good overall condition.

- 3.2.4 The semi mature Ash T5 is in good overall condition but is of relatively low arboricultural value. There are occasional minor old pruning wounds in its lower crown from previous minor crown lifting works.
- 3.2.5 Many Ash trees in the wider region are being impacted by Chalara or Ash Dieback. Once a tree is infected, the disease is usually fatal, either directly or indirectly. While T1, T2 and T5 may continue to provide landscape and wildlife benefits for some time, their long-term prospects are likely to be limited as a result of Ash Dieback.
- 3.2.6 Hawthorn group G3 and Elder and Hawthorn group G4 are of very low value and in relatively poor condition but provide some screening between the site and the adjacent land to the north.
- 3.2.7 The Willow T6 is situated beyond an access track to the south of the site and was only given a cursory inspection with measurements estimated and condition values indicative only. The tree has been previously heavily topped with regrowth forming its crown and numerous significant decayed pruning wounds to its stem.
- 3.2.8 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 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.
- 3.2.9 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.

3.3 Arboricultural Development Advice

- 3.3.1 The higher value retention category 'B' trees should be retained, where possible, and incorporated into any new development design.
- 3.3.2 Where suitable, those category 'C' trees and tree groups with reasonable future prospects (as detailed at 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 tree groups could be removed, and

replacement planting would largely mitigate their losses.

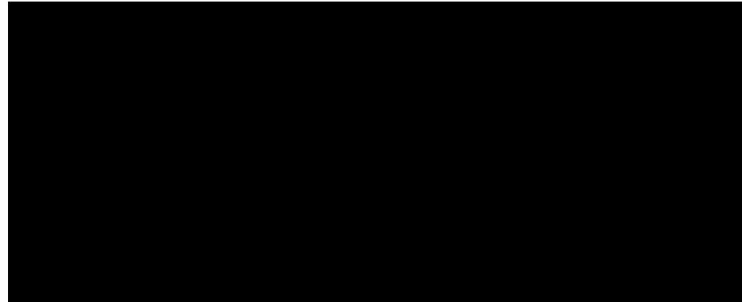
- 3.3.4 The tree Root Protection Area (RPA), detailed on the Tree Constraints Plan at Appendix 5, should be used as a layout design tool, to inform on the area around a tree where the protection of the roots and soil structure is treated as a priority.
- 3.3.5 If construction of new buildings is required within the RPA of retained trees 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 method 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.



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

3rd December 2020

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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, 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 Arboriculture, 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 Tom Readman *Cert Arb L3, Level 4 Forestry and Arboriculture, 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 at Distinction Star, and was recognised as the student of the year, in the Extended Diploma in Forestry and Arboriculture and is now completing a Foundation Degree in Arboriculture, while working at AWA. Tom's work focuses on tree risk surveys and accurate tree data collection for development projects 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 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.

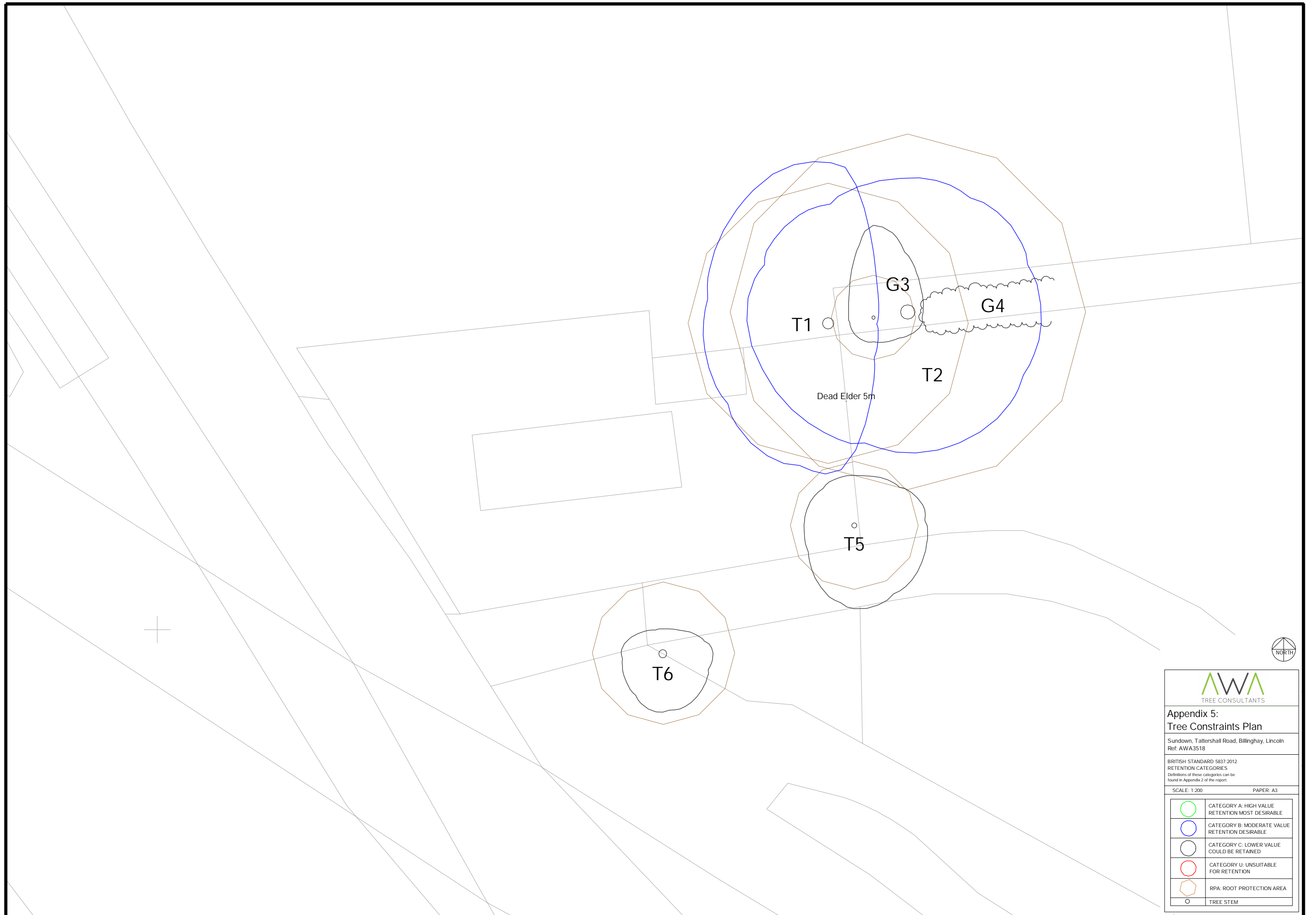
B (marked in blue on Appendix 5) = retention desirable. These trees are of good quality and value with a significant life expectancy.

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	Ave Height	N	E	S	W	Roots	Stem	Crown	Comments	Physiological	Structural	Life Expectancy	Amenity	Category	Works
T1	Ash	<i>Fraxinus excelsior</i>	Mature	15	1	680	No	1.5	10	3	9	7.5	No visual defects	Single stemmed. Vertical. Bark damage	Minor deadwood. Old pruning wounds. Minor deadwood and numerous minor snapouts throughout crown. Moderate snapout from lower western crown at 2.5m approx.	Situated on southern edge of drainage ditch. Outbuildings at immediate base to south and west. Outbuildings in contact with stem.	Good	Good	20 to 40 yrs	Moderate	B	No works required in current site context
T2	Ash	<i>Fraxinus excelsior</i>	Mature	16	3	720, 310, 360	No	2	8	8	8.5	9.5	Soil erosion. Exposed roots	Multiple stemmed at base. Vertical. Bark damage. Minor cavity at base of largest northern stem but with good reaction growth. Tight unions. Partially included bark	Minor deadwood and snapouts throughout crown.	Situated on southern edge of drainage ditch. Outbuildings to south. Outbuildings in contact with stem. Partially included bark union at junction of main stems at base.	Good	Fair	20 to 40 yrs	Moderate	B	No works required in current site context
G3	Hawthorn	<i>Crataegus monogyna</i>	Semi-mature	6	2	150, 140	No	1.5	5.5	3	1.5	1.5	No visual defects	Twin stemmed at base. Slight lean north east. Bark damage. Major decay	Minor deadwood. Minor snapouts	Two trees forming one crown. Extensive bark damage and decay to eastern stem.	Fair	Poor	10 to 20 yrs	Low	C	No works required in current site context

Tree ID	Tree Species		Maturity	Measurements				Crown (m)				Tree Condition						Value		Management		
	Common Name	Latin Name		Height (m)	Stems	Stem Diameter (mm)	Estimated	Ave Height	N	E	S	W	Roots	Stem	Crown	Comments	Physiological	Structural	Life Expectancy	Amenity	Category	Works
G4	Elder. Hawthorn.	<i>Sambucus sp.</i> <i>Crataegus sp.</i>	Early-mature	4	10+	40	No	0	See plan				Soil erosion. Exposed roots	Single and Multiple stemmed. Old pruning wounds. Stubs. Bark damage. Tight unions. Minor cavities. Moderate decay	Old pruning wounds. Minor deadwood. Minor dieback. Minor snapouts	Linear group of Elder and Hawthorn bordering southern edge of drainage ditch. Larger Elders have been heavily topped. Decay throughout.	Fair	Fair	10 to 20 yrs	Low	C	No works required in current site context
T5	Ash	<i>Fraxinus excelsior</i>	Semi-mature	14	1	310	No	2	3	4.5	5	3	No visual defects	Single stemmed. Vertical. Epicormic growths	Old pruning wounds. Minor deadwood. Minor snapouts	Caravan at base to immediate east. Large epicormic growths at base to south. Occasional minor old pruning wounds in lower crown.	Good	Good	20 to 40 yrs	Moderate	C	No works required in current site context
T6	Willow	<i>Salix caprea</i>	Early-mature	11	2	300, 300	Yes	0.5	1.5	3	3.5	2.5	Limited access around base	Twin stemmed at 1m. Vertical. Tight unions. Old pruning wounds. Bark damage. Epicormic growths. Minor cavities. Minor decay	Previously topped	Adjacent, limited access. Previously topped at 2m to 3m with regrowth forming crown. Numerous significant old pruning wounds with decay.	Fair	Fair	10 to 20 yrs	Low	C	No works required in current site context



**Appendix 5:
Tree Constraints Plan**

Sundown, Tattershall Road, Billingham, Lincoln
Ref: AWA3518

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

SCALE: 1:200 PAPER: A3

	CATEGORY A: HIGH VALUE RETENTION MOST DESIRABLE
	CATEGORY B: MODERATE VALUE RETENTION DESIRABLE
	CATEGORY C: LOWER VALUE COULD BE RETAINED
	CATEGORY U: UNSUITABLE FOR RETENTION
	RPA: ROOT PROTECTION AREA
	TREE STEM