



ARBORICULTURAL REPORT

& Impact Assessment

to **BS5837:2012** at:

***Darton Park,
Darton,
Barnsley,
South Yorkshire
S75 5LZ***

Prepared for:
Principal Towns Project Manager
Safer, Stronger & Healthier Communities,
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1. Introduction

1.1 Instructions and Brief

- 1.1.1 We are instructed by Fiona O'Brien 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 February 2019.
- 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 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, 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 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 off Church Street in Darton, a village in the Metropolitan Borough of Barnsley, South Yorkshire.
- 2.1.2 The site is a section of a public park consisting of a grassed area bordered by an access track to the east, churchyard to the west, care home and community centre to the north and the wider public park to the south.
- 2.1.3 The approximate area of the survey is highlighted in the (2018) 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 (unless such works are approved by planning permission). 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 51 items of woody vegetation, comprised of 43 individual trees and 8 groups of trees or hedges.
- 3.2.2 Of the surveyed trees: 11 trees are retention category 'B', and 40 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 relatively good, with species present including Lime, Sycamore, Sorbus, Cherry, Willow, Alder, Cypress, Hawthorn and Elder. The site's trees had a good age diversity with a mix of semi-mature, early-mature and mature trees.
- 3.2.4 The site's most significant trees are the mature Limes T20, T21, T23, T26 and T29, situated in the adjacent churchyard to the west of the site. The trees are situated on raised ground around 1m higher than the site to the east, behind a retaining wall. Rubble is piled to the west of trees T23, T26 and T29 and is likely causing soil compaction; the soil compaction could be the cause of the dieback and deadwood in the crowns of the trees. The trees form a significant landscape feature and collectively provide moderate to high amenity value to the site and the surrounding area.
- 3.2.5 Trees T15 to T19, T48 and T49 are situated in prominent positions bordering the site's access drive. The Whitebeams T17, T19, T48 and T49 are of moderate value while the Limes T15, T16 and T18 are of relatively low value.

The trees would provide amenity value to a new development at the site if retained.

- 3.2.6 Trees T1 to T13, T41, T46 and T47 are situated in adjacent inaccessible land to the north and east of the site and so were only given cursory inspections with measurements estimated and condition values indicative only. The Cherry T41 and Sycamore T46 appear in good overall condition and provide moderate amenity value to the site, while T1 to T13 and T47 are only of low value. The Hawthorns T5 and T6 are in particularly poor condition and likely have limited future prospects. It is recommended to request the owners of T5, T6 and the Sycamores T12 and T13 to have formal risk assessments of the trees undertaken to assess their safety.
- 3.2.7 Boundary Elder and Cherry groups G42, G44 and G45 provide some screening between the site and the adjacent properties to the north, but are only of low arboricultural value.
- 3.2.8 Trees T30 to T40 border the site's north western corner. The trees are all of low value and many are in poor condition, appearing to have been regularly flailed from the east.
- 3.2.9 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.
- 3.2.10 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.
- 3.2.11 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.

4. Arboricultural Impact Assessment

4.1 Proposed New Development

4.1.1 It is proposed to build a new car park and to resurface the existing access road and build a new footway. 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 as there are no trees situated within the footprint of the development and all trees are able to be retained and protected throughout the development.

4.3 Indirect Impacts

4.3.1 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.

4.3.2 Potentially damaging activities are proposed in the vicinity of retained trees. The proposed new car park encroaches into the edge of the retained Whitebeams T17, T19 and T49 and Lime T18. However, the encroachment is minor, as such, the retained trees should remain largely unaffected by the works, provided care is taken during construction so that tree roots are damaged as little as possible.

4.3.3 The proposed resurfacing of the existing access road and footway will take place within the RPA of retained adjacent trees T1 to T9. However, as there is an existing access road in place and the proposal is to resurface the existing road, the retained adjacent trees should remain largely unaffected by the works, provided care is taken during construction so that tree roots are damaged as little as possible.

4.3.4 The proposed new 'birds mouth knee rail fencing' to the perimeter of the car park is within the RPA of retained trees T17, T18, T19, T29 and T49. The encroachment into the trees' RPA should not significantly adversely impact on the health or future condition of the trees, provided post type footings

are used as opposed to strip footings, with the holes for the posts dug by hand.

- 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 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 mitigate for the required tree removals and, in the longer term, has the potential to improve the sites tree cover.

4.5 Protection of the Retained Trees

- 4.5.1 The retained trees will 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.

1st May 2019

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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.

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 Patrick Rowntree Cert Arb L3, TechArborA.

Patrick is a trained arborist with 5 years of experience in both the private and commercial sectors and is a technician member of the Arboricultural Association. Having travelled the world, both working as an arborist and playing professional rugby, Patrick was awarded a Distinction in the Extended Diploma in Forestry & Arboriculture. Patrick now uses his work and education experience at AWA, focusing on accurate tree data collection for tree surveys for development projects and assisting the team in the preparation of tree reports and tree plans 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.

Tree ID	Tree Species		Measurements					Crown (m)				Tree Condition						Value		Management		
	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	Lilac	<i>Syringa sp.</i>	Semi-mature	5	6	80	Yes	1.5	2	0.5	2	2	Limited access around base	Multiple stemmed at base. Vertical	Minor deadwood. Snapped/ hanging branches	Adjacent, no access	Fair	Fair	10 to 20 yrs	Low	C	No works required in current site context
G2	Cypress	<i>Cupressus sp.</i>	Early-mature	11	10+	250	Yes	1.5	See plan				Limited access around base	Single and Multiple stemmed. Tight unions	Minor deadwood	Adjacent large Cypress hedge. No access.	Good	Fair	20 to 40 yrs	Moderate	C	No works required in current site context
G3	Elder	<i>Sambucus nigra</i>	Semi-mature	5.5	10+	50	Yes	2	See plan				Limited access around base	Single and Multiple stemmed. Stubs. Old pruning wounds. Bark damage. Tight unions	Minor dieback. Minor deadwood. Snapped/ hanging branches	Adjacent linear Elder group. No access. Previously 'topped' at 1.5m.	Fair	Fair	10 to 20 yrs	Low	C	No works required in current site context
T4	Elder	<i>Sambucus nigra</i>	Semi-mature	5.5	10+	50	Yes	2	2.5	2	1	1.5	Limited access around base	Multiple stemmed at base. Vertical. Stubs	Minor dieback. Minor deadwood	Adjacent, no access	Fair	Fair	10 to 20 yrs	Low	C	No works required in current site context
T5	Hawthorn	<i>Crataegus monogyna</i>	Early-mature	10	7	120	Yes	3	3	3.5	2	1.5	Limited access around base	Multiple stemmed at base. Vertical. Stubs. Bark damage. Moderate cavities. Moderate decay	50% dead/ absent. Major dieback. Moderate deadwood. Snapped/ hanging branches	Adjacent, no access. Numerous decayed cavities and bark damage. Most of western crown is dead.	Poor	Poor	<10 yrs	Low	C	Formal risk assessment recommended regardless of development

Tree ID	Tree Species		Measurements					Crown (m)				Tree Condition						Value		Management		
	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	Hawthorn	<i>Crataegus monogyna</i>	Early-mature	10	6	120	Yes	4	4	1	3.5	4	Limited access around base	Multiple stemmed at base. Stubs. Bark damage. Moderate cavities. Moderate decay	Moderate dieback. 25% dead/ absent. Moderate deadwood	Adjacent, no access. Considerable dieback in crown. Occasional decayed stems.	Fair	Poor	10 to 20 yrs	Low	C	Formal risk assessment recommended regardless of development
T7	Hawthorn	<i>Crataegus monogyna</i>	Early-mature	10	1	300	Yes	3	3.5	5	3.5	0.5	Limited access around base	Single stemmed. Slight lean north east. Stubs	Minor deadwood	Adjacent, no access	Good	Good	20 to 40 yrs	Low	C	No works required in current site context
T8	Hawthorn	<i>Crataegus monogyna</i>	Semi-mature	8	5	150, 150, 120, 120, 50	Yes	4	0.5	5	4	2.5	Limited access around base	Multiple stemmed at base. Vertical. Stubs	Minor deadwood. Snapped/ hanging branches	Adjacent, no access	Fair	Fair	20 to 40 yrs	Low	C	No works required in current site context
T9	Hawthorn	<i>Crataegus monogyna</i>	Early-mature	8	1	200	Yes	1.5	0.5	4	3.5	1.5	Limited access around base	Single stemmed. Slight lean south east. Stubs. Bark damage	Minor deadwood. Snapped/ hanging branches	Adjacent, no access. Cable embedded in stem at 1.5m.	Fair	Fair	10 to 20 yrs	Low	C	No works required in current site context
G10	Willow. Elder.	<i>Salix sp. Sambucus sp.</i>	Semi-mature	7	10+	60	Yes	0.5	2.5	2.5	2.5	2.5	Limited access around base	Multiple stemmed at base. Tight unions	Minor deadwood	Adjacent, no access. Goat Willow and Elder forming one crown.	Good	Good	20 to 40 yrs	Low	C	No works required in current site context
T11	Elder	<i>Sambucus nigra</i>	Early-mature	6	10+	50	Yes	0.5	2	2	2	2	Limited access around base	Multiple stemmed at base. Vertical. Tight unions	Minor deadwood	Adjacent, no access	Fair	Good	10 to 20 yrs	Low	C	No works required in current site context

Tree ID	Tree Species		Measurements					Crown (m)				Tree Condition						Value		Management		
	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	Sycamore	<i>Acer pseudoplatanus</i>	Early-mature	14	2	450, 250	Yes	1	5	5	4	4.5	Limited access around base	Twin stemmed at 1m. Slight lean. Stubs. Bark damage. Minor cavity. Major cavity. Moderate decay	Minor deadwood. Bark damage. Snapped/ hanging branches	Adjacent, no access. Extensive bark damage to main stems. Moderate snapout from western side of main stem at 1m leaving moderate decayed cavity. Bark damage in crown, likely squirrel damage. Occasional minor snapout from crown.	Fair	Fair	10 to 20 yrs	Moderate	C	Formal risk assessment recommended regardless of development
T13	Sycamore	<i>Acer pseudoplatanus</i>	Early-mature	15	1	450	Yes	4	3.5	3.5	5.5	5	Limited access around base	Single stemmed. Multiple stemmed at 2m. Slight lean. Old pruning wounds. Stubs. Bark damage. Tight unions	Minor deadwood. Bark damage	Adjacent, no access. Previously crown lifted leaving numerous poor old pruning wounds and stubs. Mechanical damage at 2m. Looks to have been 'ring barked' at 1m.	Fair	Fair	20 to 40 yrs	Moderate	C	Formal risk assessment recommended regardless of development
G14	Privet	<i>Ligustrum vulgare</i>	Semi-mature	2	10+	20	No	0	See plan			No visual defects	Single and Multiple stemmed. Old pruning wounds. Stubs	Old pruning wounds	Managed Privet hedge surrounding bowling green	Good	Good	20 to 40 yrs	Moderate	C	No works required	

Tree ID	Tree Species		Measurements					Crown (m)				Tree Condition						Value		Management		
	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
T15	Lime	<i>Tilia x europaea</i>	Semi-mature	9	1	230	No	1.5	4	4	3	4	No visual defects	Single stemmed. Vertical. Stubs. Old pruning wounds	Minor deadwood	Bird's nest in crown	Good	Good	>40 yrs	Moderate	C	No works required
T16	Lime	<i>Tilia x europaea</i>	Semi-mature	5	1	120	No	1.5	2	2.5	2	0.5	No visual defects	Single stemmed. Slight lean east. Old pruning wounds. Stubs	Minor deadwood. Old pruning wounds	Occasional old pruning wound to main stem. Crown previously reduced from east.	Fair	Fair	20 to 40 yrs	Moderate	C	No works required
T17	Whitebeam	<i>Sorbus aria</i>	Early-mature	9	1	400	No	2	4	4.5	5	3	No visual defects	Single stemmed. Slight lean east. Mower damage. Old pruning wounds. Vertical	Old pruning wounds. Minor deadwood	Minor mower damage at base of stem. Occasional old pruning wounds to stem and in crown.	Good	Good	>40 yrs	Moderate	B	No works required in current site context
T18	Lime	<i>Tilia x europaea</i>	Semi-mature	9	1	270	No	1.5	3.5	4.5	4	3.5	No visual defects	Single stemmed. Vertical. Old pruning wounds. Stubs	Minor deadwood. Old pruning wounds	Bird's nest in crown	Good	Good	>40 yrs	Moderate	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
T19	Whitebeam	<i>Sorbus aria</i>	Early-mature	10	1	490	No	2.5	4.5	4.5	5	4.5	No visual defects	Single stemmed. Multiple stemmed at 1.5m. Slight lean east. Old pruning wounds. Bark damage. Tight unions. Minor cavities	Old pruning wounds. Minor deadwood	Minor bark damage to western side of main stem at base. Numerous tight unions at 1.5m. Hawthorn saplings growing from base to south west. Occasional minor cavities in old pruning wounds.	Good	Fair	>40 yrs	Moderate	B	No works required in current site context
T20	Lime	<i>Tilia x europaea</i>	Mature	20	1	760	No	1.5	4.5	6	4.5	7	Soft ground with garden waste piled at base	Single stemmed. Twin stemmed at 2m. Vertical. Epicormic growths. Stubs	Moderate deadwood	Adjacent tree in churchyard. On ground 1m higher than site, behind retaining wall. Occasional decayed stub to main stem and moderate deadwood stub in crown.	Fair	Fair	>40 yrs	Moderate	B	No works required in current site context

Tree ID	Tree Species		Measurements					Crown (m)				Tree Condition						Value		Management		
	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	Lime	<i>Tilia x europaea</i>	Mature	28	1	810	No	2	4	6.5	4	7.5	Soft ground with garden waste piled at base	Single stemmed. Vertical. Bark damage. Epicormic growths. Minor cavity	Moderate deadwood	Adjacent tree in churchyard. On ground 1m higher than site, behind retaining wall. Minor cavity from old snapout to eastern side of main stem at 1.5m, but healing well. Moderate deadwood in crown.	Fair	Fair	>40 yrs	Moderate	B	No works required in current site context
T22	Elder	<i>Sambucus nigra</i>	Semi-mature	5	1	100	No	3	1.5	2.5	1	0.5	No visual defects	Single stemmed. Slight lean. Stubs. Old pruning wounds. Bark damage. Minor cavities. Moderate decay	Minor dieback. Minor deadwood. Snapped/hanging branches	Decayed cavities to main stem. Leaning on wall.	Fair	Poor	<10 yrs	Low	C	No works required in current site context
T23	Lime	<i>Tilia x europaea</i>	Mature	20	1	600	No	2	2.5	5	2.5	3.5	Soil compaction	Single stemmed. Vertical. Epicormic growths	Moderate deadwood. Snapped/hanging branches. Moderate dieback	Adjacent tree in churchyard. On ground 1m higher than site, behind retaining wall. Rubble piled over rootpath to west. Dense epicormics at base prevented accurate stem measurement. Moderate dieback and deadwood in crown.	Fair	Fair	20 to 40 yrs	Moderate	B	No works required in current site context

Tree ID	Tree Species		Measurements					Crown (m)				Tree Condition						Value		Management		
	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
T24	Sycamore	<i>Acer pseudoplatanus</i>	Semi-mature	6	1	160	No	3	4.5	3.5	0.5	0.5	Soil compaction	Single stemmed. Significant lean east. Epicormic growths. Stubs. Bark damage	Minor deadwood. Snapped/hanging branches	Moderate eastern stem snapped out at base. Rubble piled over rootplate to west. Main stem snapped out in crown.	Fair	Fair	10 to 20 yrs	Low	C	No works required in current site context
T25	Sycamore	<i>Acer pseudoplatanus</i>	Semi-mature	13	1	210	No	6	2	1.5	1	0.5	Soil compaction	Single stemmed. Slight lean. Stubs	Minor deadwood	Rubble over rootplate to west	Good	Fair	20 to 40 yrs	Low	C	No works required in current site context
T26	Lime	<i>Tilia x europaea</i>	Mature	20	1	500	No	2	3	5	2	3	Soil compaction	Single stemmed. Vertical. Epicormic growths	Moderate dieback. Moderate deadwood. Snapped/hanging branches	Adjacent tree in churchyard. On ground 1m higher than site, behind retaining wall. Rubble piled over rootplate to west.	Fair	Fair	20 to 40 yrs	Moderate	B	No works required in current site context
T27	Sycamore	<i>Acer pseudoplatanus</i>	Semi-mature	8	1	240	No	3	3	6.5	0.5	0.5	Soil compaction	Single stemmed. Twin stemmed at 1.5m. Slight lean	Minor deadwood. Snapped/hanging branches	Rubble piled over rootplate to west. Bark damage and cavities to eastern main limb.	Good	Fair	20 to 40 yrs	Low	C	No works required in current site context
T28	Sycamore	<i>Acer pseudoplatanus</i>	Semi-mature	6	1	200	No	2	3	5.5	0.5	0.5	Soil compaction	Single stemmed. Slight lean	Minor deadwood. Snapped/hanging branches	Rubble piled over rootplate	Good	Fair	20 to 40 yrs	Low	C	No works required in current site context

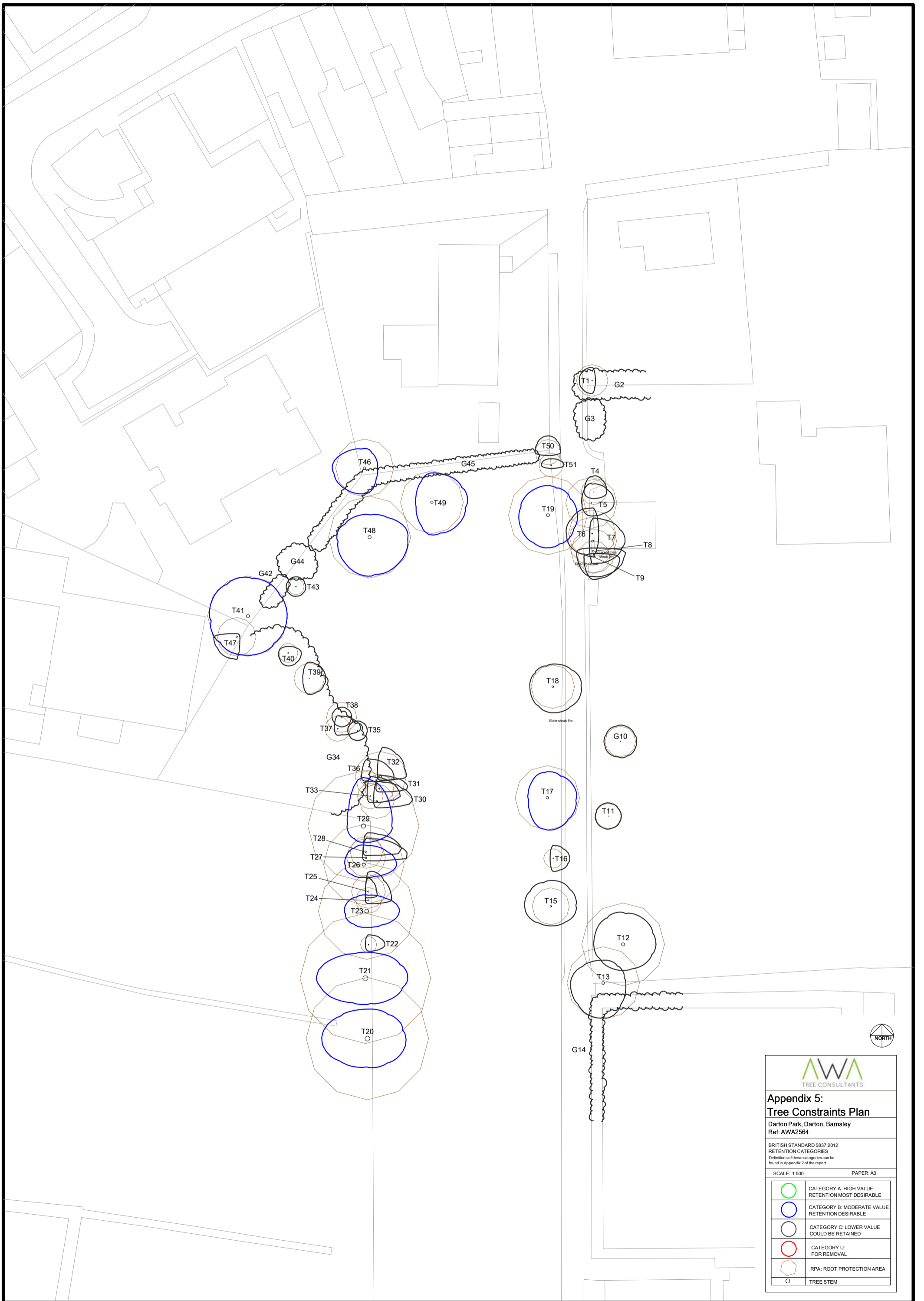
Tree Species		Measurements				Crown (m)				Tree Condition							Value		Management			
Tree ID	Common Name	Latin Name	Maturity	Height (m)	Stems	Stem Dia (mm)	Estimated	Ave Height	N	E	S	W	Roots	Stem	Crown	Comments	Physiological	Structural	Life Expectancy	Amenity	Category	Works
T29	Lime	<i>Tilia x europaea</i>	Mature	20	1	690	No	2	7.5	4.5	2.5	2.5	Soil compaction	Single stemmed. Vertical. Epicormic growths	Moderate dieback. Moderate deadwood	Adjacent tree in churchyard. On ground 1m higher than site, behind two retaining walls.	Fair	Fair	20 to 40 yrs	Moderate	B	No works required in current site context
G34	Willow. Elder. Dogwood.	<i>Salix sp.</i> <i>Sambucus sp.</i> <i>Cornus sp.</i>	Semi-mature	6	10+	100	No	0.5	See plan				Exposed roots	Single and Multiple stemmed. Bark damage. Tight unions. Minor cavities. Minor decay	Minor deadwood. Snapped/ hanging branches	Dense group of semi mature trees. Flaied from east. Low value.	Fair	Fair	20 to 40 yrs	Low	C	No works required in current site context
T30	Willow	<i>Salix caprea</i>	Semi-mature	8	2	170, 130	No	3	3	5.5	1	0.5	No visual defects	Twin stemmed at 1m. Slight lean east. Stubs. Bark damage	Minor deadwood. Snapped/ hanging branches	Numerous snapouts from main stem and crown Extensive bark damage. Flaied from east.	Fair	Fair	10 to 20 yrs	Low	C	No works required in current site context
T31	Willow	<i>Salix caprea</i>	Semi-mature	9	1	180	No	3	2	4.5	0.5	0.5	No visual defects	Single stemmed. Slight lean east. Stubs. Bark damage	Snapped/ hanging branches. Minor deadwood. Minor dieback	Numerous snapouts from main stem and crown. Extensive bark damage. Flaied from east.	Fair	Fair	10 to 20 yrs	Low	C	No works required in current site context
T32	Willow	<i>Salix caprea</i>	Semi-mature	8	4	160, 130, 180, 160	No	3	4.5	4	0.5	0.5	Exposed roots	Multiple stemmed at 1m. Slight lean north east. Stubs. Bark damage. Minor cavities	Minor dieback. Minor deadwood. Snapped/ hanging branches	Numerous snapouts and bark damage. Flaied from east.	Fair	Fair	10 to 20 yrs	Low	C	No works required in current site context
T33	Willow	<i>Salix caprea</i>	Semi-mature	8	1	160	No	6	3	4.5	1	0.5	Exposed roots	Single stemmed. Slight lean. Bark damage	Minor deadwood	Flaied from east	Fair	Fair	10 to 20 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
T35	Alder	<i>Alnus glutinosa</i>	Semi-mature	10	1	120	No	4	1.5	1.5	1.5	1.5	Exposed roots	Single stemmed. Vertical. Stubs. Bark damage	Minor deadwood		Fair	Good	20 to 40 yrs	Low	C	No works required in current site context
T36	Alder	<i>Alnus glutinosa</i>	Semi-mature	7	1	100	No	5	3	4	0.5	1	Exposed roots	Single stemmed. Slight lean north east	Minor deadwood		Fair	Good	10 to 20 yrs	Low	C	No works required in current site context
T37	Willow	<i>Salix caprea</i>	Semi-mature	9	2	130, 90	No	4	2	3.5	1	0.5	No visual defects	Twin stemmed at 0.5m. Slight lean. Stubs. Bark damage. Cankers	Minor deadwood. Snapped/ hanging branches		Fair	Fair	10 to 20 yrs	Low		No works required in current site context
T38	Willow	<i>Salix caprea</i>	Semi-mature	9	2	170, 80	No	3	1.5	1.5	1.5	1.5	No visual defects	Twin stemmed at 0.5m. Slight lean north east. Stubs. Bark damage. Cankers	Minor deadwood. Snapped/ hanging branches		Fair	Fair	10 to 20 yrs	Low	C	No works required in current site context
T39	Willow	<i>Salix caprea</i>	Semi-mature	8	10+	60	No	0.5	2.5	2.5	2.5	1	Exposed roots	Multiple stemmed at base. Stubs. Slight lean. Bark damage. Tight unions	Minor deadwood. Snapped/ hanging branches		Fair	Fair	10 to 20 yrs	Low	C	No works required in current site context
T40	Alder	<i>Alnus glutinosa</i>	Semi-mature	9	1	120	No	5	1	2	2	1.5	No visual defects	Single stemmed. Vertical	Normal	Limited access	Good	Good	10 to 20 yrs	Low	C	No works required in current site context

Tree ID	Tree Species		Measurements					Crown (m)				Tree Condition						Value		Management		
	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
T41	Cherry	<i>Prunus sp.</i>	Mature	17	1	500	Yes	4	6	6	6	6	Limited access around base	Single stemmed. Vertical. Tight unions	Minor deadwood	Adjacent, no access	Good	Good	>40 yrs	Moderate	B	No works required in current site context
G42	Elder	<i>Sambucus nigra</i>	Semi-mature	5	10+	50	No	1	See plan				No visual defects	Single and Multiple stemmed. Stubs. Old pruning wounds. Bark damage. Tight unions. Minor cavities	Minor dieback. Minor deadwood	Linear boundary group of Elder. Some screening value.	Fair	Fair	10 to 20 yrs	Moderate	C	No works required in current site context
T43	Cherry	<i>Prunus sp.</i>	Semi-mature	6	1	100	No	1.5	1.5	1.5	1.5	1.5	No visual defects	Single stemmed. Vertical	Normal		Good	Good	20 to 40 yrs	Moderate	C	No works required in current site context
G44	Cherry	<i>Prunus sp.</i>	Semi-mature	9	9	120	No	1	See plan				No visual defects	Single and Multiple stemmed. Vertical. Bark damage. Tight unions. Stubs	Minor deadwood	Linear boundary group of Cherry. Some screening value.	Good	Fair	20 to 40 yrs	Moderate	C	No works required in current site context
G45	Elder	<i>Sambucus nigra</i>	Early-mature	5	10+	60	No	0.5	See plan				No visual defects	Single and Multiple stemmed. Stubs. Old pruning wounds. Bark damage. Tight unions. Minor cavities	Minor dieback. Minor deadwood	Boundary group of Elder. Some screening value.	Fair	Fair	10 to 20 yrs	Moderate	C	No works required in current site context

Tree ID	Tree Species		Measurements					Crown (m)				Tree Condition						Value		Management		
	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
T46	Sycamore	<i>Acer pseudoplatanus</i>	Early-mature	14	2	270, 240	No	5	3	2	4	5	No visual defects	Twin stemmed at 0.5m. Vertical. Tight unions. Partially included bark. Old pruning wounds	Minor deadwood	Two co-dominant stems at 0.5m with partially included bark union.	Good	Fair	20 to 40 yrs	Moderate	B	No works required in current site context
T47	Sycamore	<i>Acer pseudoplatanus</i>	Semi-mature	13	1	240	Yes	6	0.5	0.5	3.5	3.5	Limited access around base	Single stemmed. Vertical. Stubs. Old pruning wounds	Moderate dieback. Moderate deadwood	Adjacent, no access	Fair	Fair	10 to 20 yrs	Low	C	No works required in current site context
T48	Whitebeam	<i>Sorbus aria</i>	Early-mature	14	1	510	No	2	3.5	6	6	5	No visual defects	Single stemmed. Multiple stemmed at 2m. Slight lean south. Bark damage. Tight unions. Partially included bark. Old pruning wounds. Stubs	Minor deadwood. Old pruning wounds	Numerous tight unions with partially included bark at 2m. Bark damage and old pruning wounds to main stems but with only minor decay. Occasional old pruning wounds in crown. Previously crown lifted.	Fair	Fair	>40 yrs	Moderate	B	No works required in current site context

Tree ID	Tree Species		Measurements					Crown (m)				Tree Condition						Value		Management		
	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
T49	Whitebeam	<i>Sorbus aria</i>	Early-mature	11	1	390	No	2	4.5	5.5	5	2.5	No visual defects	Single stemmed. Slight lean east. Old pruning wounds. Bark damage. Stubs	Minor deadwood	Numerous tight unions with partially included. Bark damage and old pruning wounds to main stems but with only minor decay. Occasional old pruning wounds in crown.	Fair	Fair	>40 yrs	Moderate	B	No works required in current site context
T50	Hawthorn	<i>Crataegus monogyna</i>	Semi-mature	8	10+	50	No	2	2.5	2	0.5	2	No visual defects	Multiple stemmed at 1m. Vertical. Stubs. Old pruning wounds. Bark damage. Tight unions. Minor cavities	Minor deadwood	Likely previously 'topped' at 1m	Good	Fair	10 to 20 yrs	Low	C	No works required in current site context
T51	Elder	<i>Sambucus nigra</i>	Semi-mature	6.5	2	110, 100	No	2	1	2	0.5	1.5	No visual defects	Multiple stemmed at base. Vertical. Epicormic growths. Stubs. Old pruning wounds. Bark damage. Minor cavities	Minor deadwood	Numerous main stems previously removed at 1m to 1.5m	Fair	Fair	10 to 20 yrs	Low	C	No works required in current site context

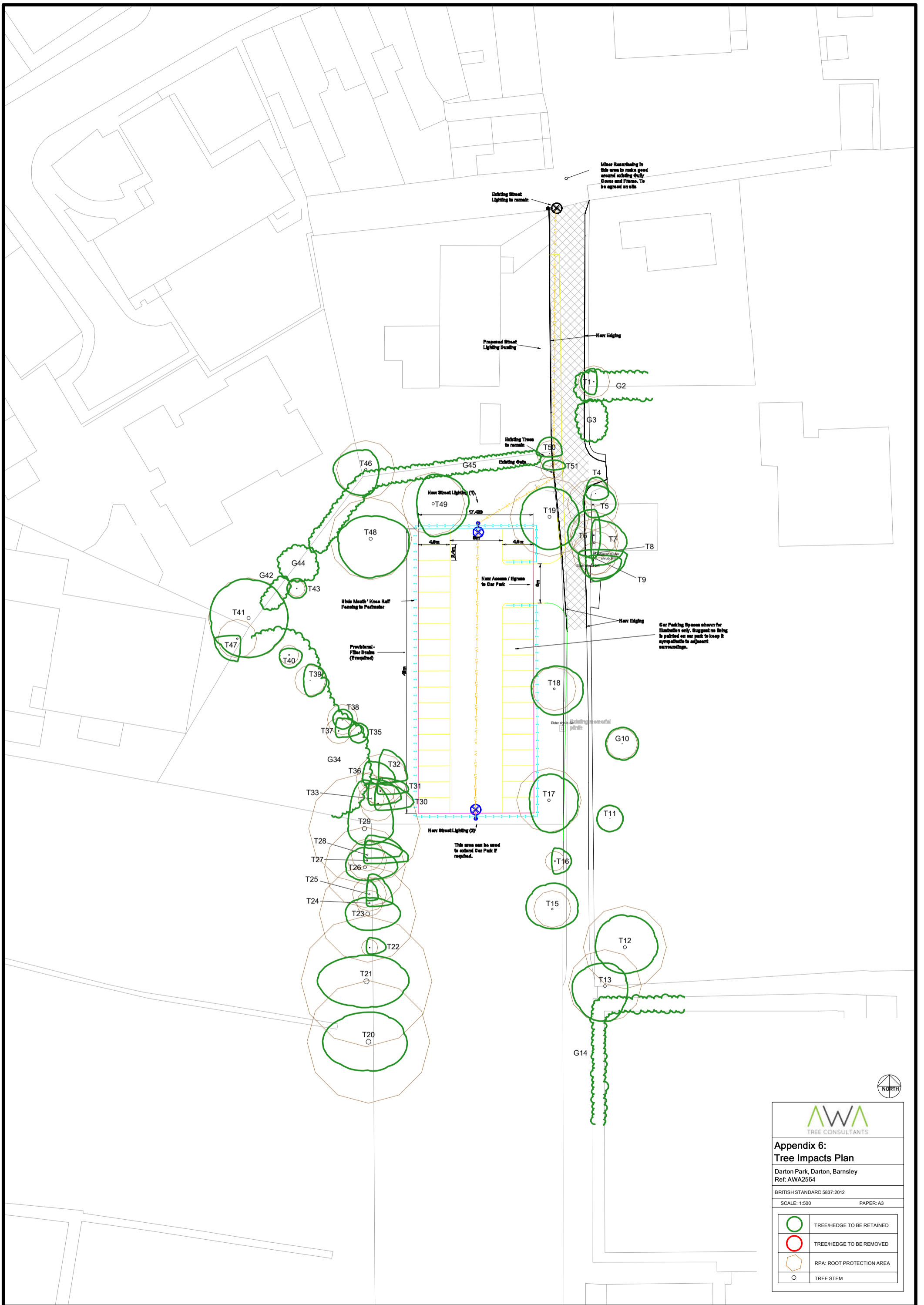



Appendix 5:
Tree Constraints Plan
 Darton Park, Darton, Barnsley
 Ref: AWA2564

BRITISH STANDARD 5837:2012
 RETENTION CATEGORIES
 Definitions of these categories 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




Appendix 6:
Tree Impacts Plan
 Darton Park, Darton, Barnsley
 Ref: AWA2564
 BRITISH STANDARD 5837:2012
 SCALE: 1:500 PAPER: A3

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