



ARBORICULTURAL REPORT

& Impact Assessment

to **BS5837:2012** at:

***Darfield Family Centre,
School Street,
Darfield,
Barnsley
S73 9EU***

Prepared for:
NPS Group Barnsley
*Gateway Plaza
Sackville Street
Barnsley
South Yorkshire
S70 2RD*

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1. Introduction

1.1 Instructions and Brief

- 1.1.1 We are instructed by Ben Taylor of NPS Group Barnsley 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 December 2018.
- 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.
- 1.2.6 The tree survey data collection was carried out by Mr Dave Farmer FdSc (Arb), MArborA, PTI (Lantra). Arboriculturist 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 Darfield, a village within the Metropolitan Borough of Barnsley, approximately 4.5 miles east of Barnsley town centre.
- 2.1.2 The site comprises the car park area of a community centre. There is a fenced in bin store at the west of the site and the main building to the east. The site is surrounded by residential properties to the north, east and west and there is a cricket ground to the south.
- 2.1.3 The approximate area of the survey is highlighted in the (2016) 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 5 items of woody vegetation, comprised of 4 individual trees and 1 tree group.
- 3.2.2 Of the surveyed trees: 2 trees are retention category 'B', and the remaining 2 trees and 1 group are retention category 'C' (explanatory details regarding the retention categories are included within Appendix 3).
- 3.2.3 The significant tree cover within the site consists of several individual trees of varying size and age category, located at the south west corner of the site, primarily in adjacent land.
- 3.2.4 The central area of the site contains little of arboricultural significance, generally consisting of the hard surfaces of the bin store and car park areas.
- 3.2.5 Species diversity at the site is fair, with several Sycamore and the occasional Lawson Cypress and Plane. The trees are all semi to early mature.
- 3.2.6 The site's most significant trees are the large, early mature Sycamore and Plane situated at the south west of the site close to the roadside (T1 and T2). These trees are visually prominent both within the site and from the surrounding areas, and provide good collective amenity value. T1 has a two metre long dead stub that overhangs the roadside, it is recommended to remove this dead stub regardless of any future development at the site.

- 3.2.7 The Sycamore tree, T5 is in a relatively poor condition. It has been previously topped at around 6m and the crown is now all regrowth from the resultant stubs. This tree has very limited future prospects and negligible arboricultural value.
- 3.2.8 The remaining trees are a semi mature Sycamore (T3) and two small Lawson Cypress trees forming a single canopy (G4). These trees have good future prospects, however they are growing close to the boundary fence with the potential to cause damage in the future.
- 3.2.9 Some trees were covered in dense Ivy or were inaccessible (as detailed in Appendix 4) in such cases measurements were estimated and the condition values are indicative only.
- 3.2.10 The tree Root Protection Area (RPA) 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.
- 3.2.11 The lower value tree group, G4 does not have a RPA detailed on tree plans. The detailed extent and spread of this low value group, in conjunction with the tree schedule, is sufficient to assess the associated potential constraints.
- 3.2.12 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 an extension to the existing building. 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 new development. All the surveyed trees can be retained and protected throughout the development. As such, the development will have no negative arboricultural impacts.

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. As such, no significant negative indirect impacts have been identified.
- 4.3.2 Potentially damaging activities are proposed in the vicinity of retained trees. The new extension encroaches close to and into the edge of the RPA of T1. Construction within the RPA, can have negative impacts on tree roots. However, the encroachment is very minor, and the detailed RPA for this tree is likely to be an exaggerated representation of the trees actual rooting area due to hard surfaces that are currently present at the site. As such, it is unlikely that significant roots will be within this area and the retained tree should remain largely unaffected by the works, provided care is taken during construction.
- 4.3.3 The design of the new development has considered the trees crown position in relation to the extension. Some shade from trees may be beneficial. In particular, deciduous trees give shade in summer but allow access to sunlight in winter. However, the design proposals avoid excessive shading, and give adequate provision for future tree growth.
- 4.3.4 The buildability of the proposed development has been assessed in terms of access, adequate working space and provision for the storage of materials, including topsoil, in relation to the trees.

4.4 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, ACIEM.

12th December 2018

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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. Arboricultural Technician. Cert Arb L3. TechArborA.

Patrick is a trained arborist with 5 years of experience in the private and commercial sectors, both in the UK and New Zealand. Formerly a professional rugby player, Patrick was awarded a distinction in the Extended Diploma in Forestry & Arboriculture and is a technician Member of the Arboricultural Association. Patrick now uses his experience at AWA focusing on BS5837:2012 tree surveys for development projects; this involves accurate tree data collection and the preparation of tree reports 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.

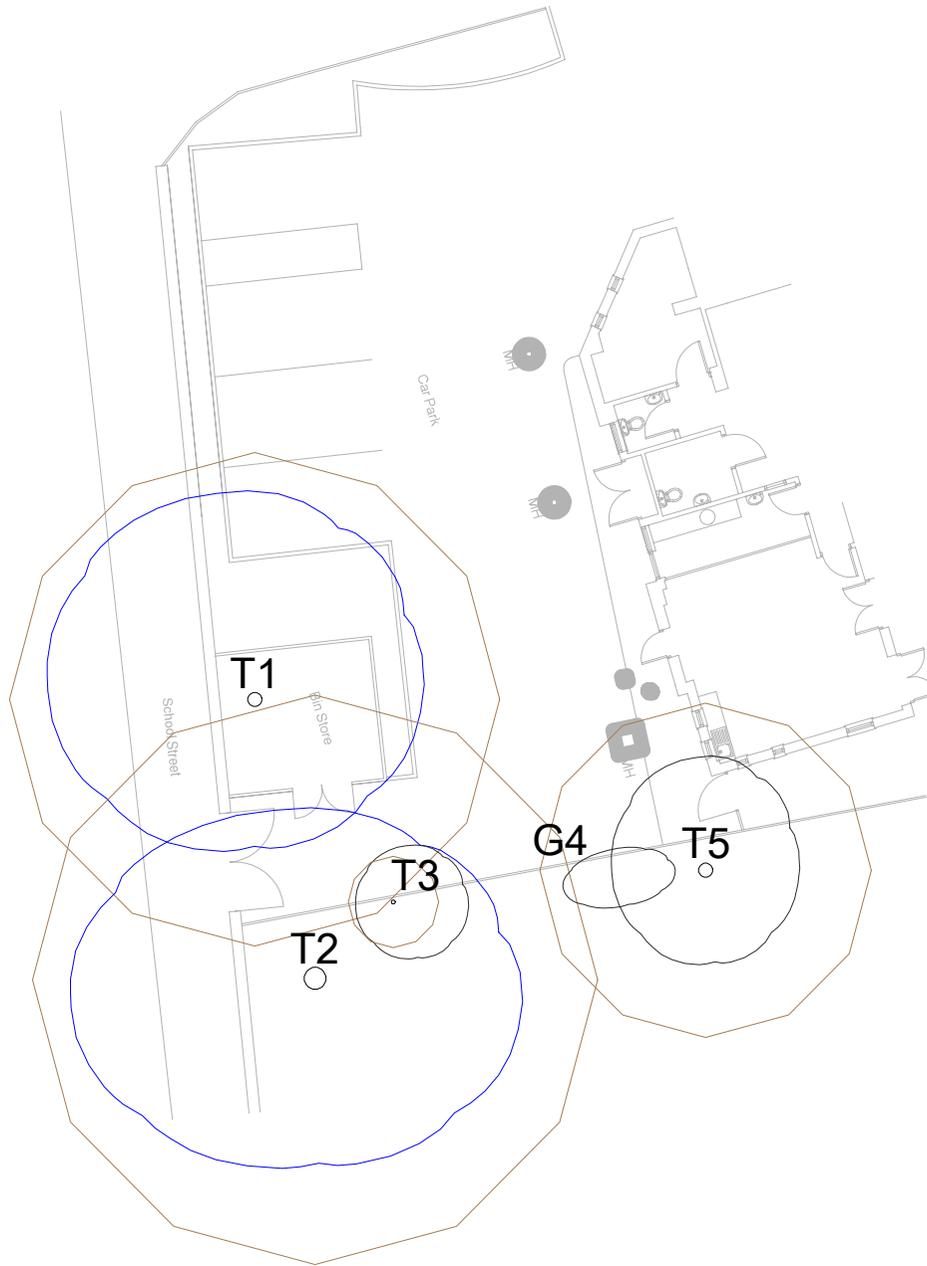
B (marked in blue on Appendix 5) = retention desirable. These trees are of good quality and value with a significant life expectancy.

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.

Appendix 4: Tree Data

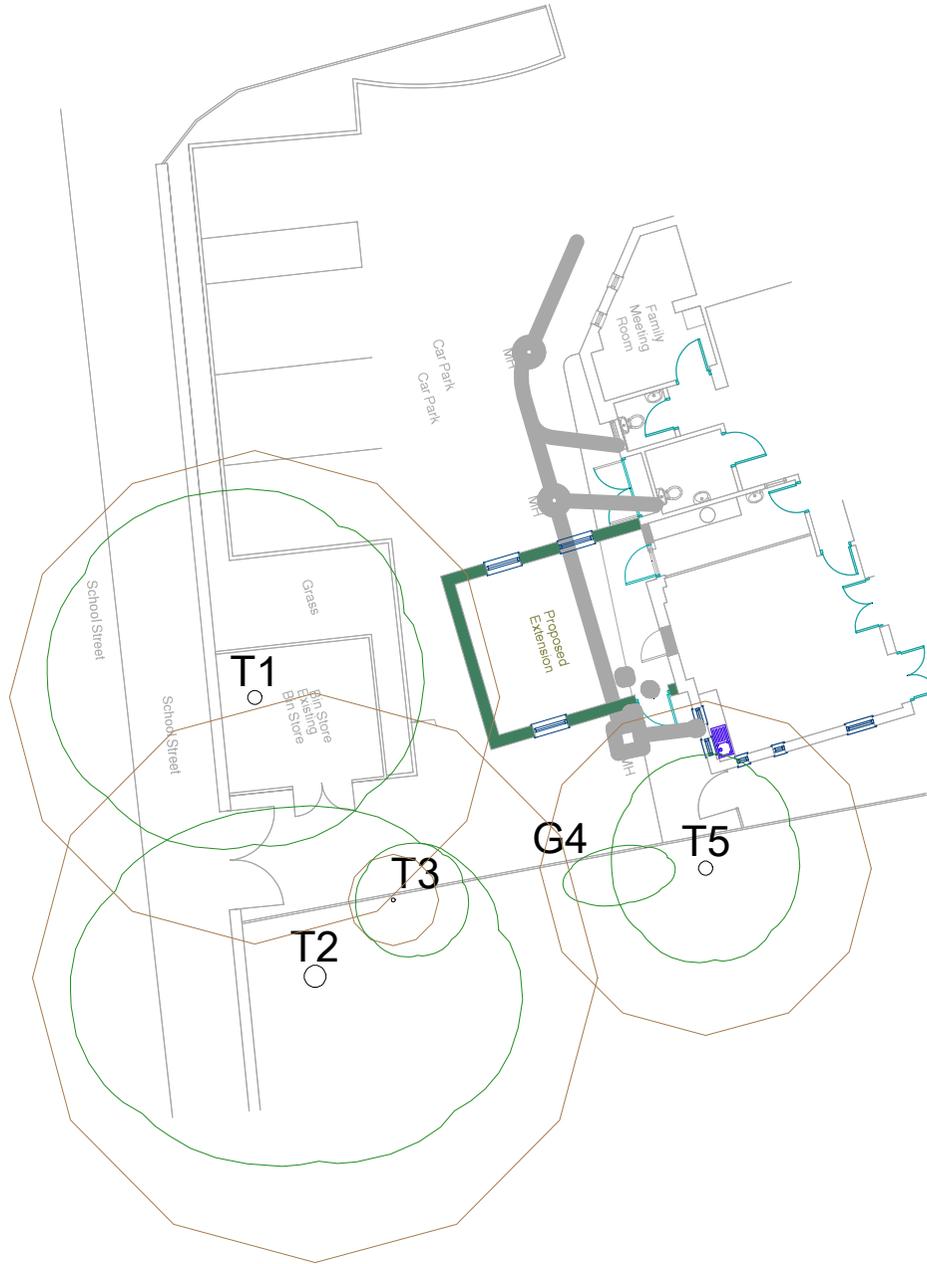
Tree Species		Measurements					Crown (m)					Tree Condition						Value		Management		
Tree ID	Common Name	Latin Name	Maturity	Height (m)	Stems	Stem Dia (mm)	Estimated	Ave Height	N	E	S	W	Roots	Stem	Crown	Comments	Physiological	Structural	Life Expectancy	Amenity	Category	Works
T1	Sycamore	<i>Acer pseudoplatanus</i>	Early-Mature	13	3	390, 370, 360	No	2.5	5.5	4.5	4.5	5.5	No visual defects, Limited rooting space	Multiple stemmed at base, Vertical, Old pruning wounds, Stubs, Ivy covered	Normal, Minor deadwood	2m long dead stub overhanging road & pavement	Good	Fair	>40 yrs	Moderate	B	Remove dead stub overhanging the road
T2	Plane	<i>Platanus x acerifolia</i>	Early-Mature	15	1	580	Yes	3	4.5	5.5	5	6.5	No visual defects	Twin stemmed at 2.5m, Vertical, Old pruning wounds, Stubs, Epicormic growths	Normal, Minor deadwood	Large short stub at 2m from previously removed stem	Fair	Fair	>40 yrs	Moderate	B	No works in current site context
T3	Sycamore	<i>Acer pseudoplatanus</i>	Semi-Mature	7	1	100	No	2	1.5	2	1.5	1	No visual defects	Single stemmed, Vertical	Snapped/ hanging branches	Growing against boundary fence	Good	Fair	20 to 40 yrs	Low	C	No works in current site context
G4	Lawson Cypress	<i>Chamaecyparis lawsoniana</i>	Semi-Mature	4.5	2	70, 60	Yes	0.5	See Plan				No visual defects	Single stemmed, Vertical	Normal	2 trees forming a single canopy, Growing close to boundary fence	Good	Good	20 to 40 yrs	Low	C	No works in current site context
T5	Sycamore	<i>Acer pseudoplatanus</i>	Early-Mature	10	1	370	Yes	2	3	2.5	2.5	2.5	No visual defects	Twin stemmed at 2m, Vertical Old pruning wounds, Stubs, Epicormic growths, Minor cavities	Small / sparse, Minor deadwood	Previously topped at 6m, Limited long term value	Fair	Fair	10 to 20 yrs	Low	C	No works in current site context




Appendix 5:
Tree Constraints Plan
 Darfield Family Centre, S73 9EU
 Ref: AW2492

BRITISH STANDARD BS37:2012
 RETENTION CATEGORIES
 Definitions of these categories can be found in Appendix 2 of the report.

SCALE: 1:200	PAPER: A4
	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
 Darfield Family Centre, S73 9EU
 Ref: AW2482

BRITISH STANDARD 5837:2012
 SCALE: 1:200 PAPER: A4

	TREENEGE TO BE RETAINED
	TREENEGE TO BE REMOVED
	RPA ROOT PROTECTION AREA
	TREE STEM