



ARBORICULTURAL REPORT & Impact Assessment to BS5837:2012 at:

***South Street,
Darfield,
Barnsley,
South Yorkshire
S73 9NH***

Prepared for:
White Agus Partnership
8 Morston Claycliffe Office Park,
Whaley Road,
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1. Introduction

1.1 Instructions and Brief

- 1.1.1 We are instructed by Robert Agus of White Agus Partnership 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 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 We have been provided with a topographical survey with tree positions plotted, where surveyed trees were not included on the topographical survey the tree positions were plotted 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.
- 1.2.6 The tree survey data collection was carried out by Mr Ricky Nos, BSc (Hons), FdSc (Arboriculture), TechArborA and Mr James Brown, BSc (Hons) Arboriculture. MArborA, Arboriculturists at AWA Tree Consultants.
- 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 on South Street in Darfield, a village within the Metropolitan Borough of Barnsley, South Yorkshire.
- 2.1.2 The site is an area of vacant grassland bordered by minor roads to the north, east and south and residential properties to the west.
- 2.1.3 The approximate survey area has been highlighted in the (2017) 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 10 items of woody vegetation, comprised of 10 individual trees. All of the surveyed trees are retention category 'B' (explanatory details regarding the retention categories are included within Appendix 3).
- 3.2.2 All the surveyed trees are early-mature Limes which form part of an avenue of street trees bordering South Street, at the site's eastern boundary, and West Street along the northern boundary (T1 to T10). Collectively the trees form a high value landscape feature in an area with limited established tree cover.
- 3.2.3 All trees have been previously heavily cut back at around 6m from ground level, and managed as pollards, with the last cutting management appearing to have been undertaken around 10 years ago.
- 3.2.4 The trees are situated within the tarmac footpath, with the most of the trees' roots cracking and lifting the tarmac to various degrees. Tree T4 is also displacing a kerb stone.
- 3.2.5 Tree T1 has a large area of bark damage to the south eastern side of the main stem, while not a significant issue, this may limit its long-term prospects.

4. Arboricultural Impact Assessment

4.1 Proposed New Development

- 4.1.1 It is proposed to build a new residential development with associated parking and access. 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 in the footprint of the structures and the retention and protection of all trees throughout the development is suitable.

4.3 Indirect Impacts

- 4.3.1 The tree Root Protection Area (RPA) is detailed on the Tree Constraints Plan at Appendix 5. 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 pollard management, the RPA is likely to be a simplified representation of the tree roots actual morphology and disposition.
- 4.3.2 Potentially damaging activities are proposed near retained trees. New hard surfaces are proposed that encroach into the RPA of retained trees T1, T2, T6, T7 and T8. The construction of hard surfaces 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 methods with a porous final surface.

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 An associated Arboricultural Method Statement, detailing protective fencing specifications and 'no-dig' 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.

7th September 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 Ricky Nos BSc (Hons), FdSc (Arboriculture), TechArborA.

Ricky is a trained arborist with 10 years of experience in the private and local authority sectors, taking in all aspects of arboricultural work. He has a Foundation Degree in Arboriculture and a BSc (Honours) in Outdoor Management, and is a technician Member of the Arboricultural Association. His main work consists of tree surveys for development projects, involving tree inspections 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.

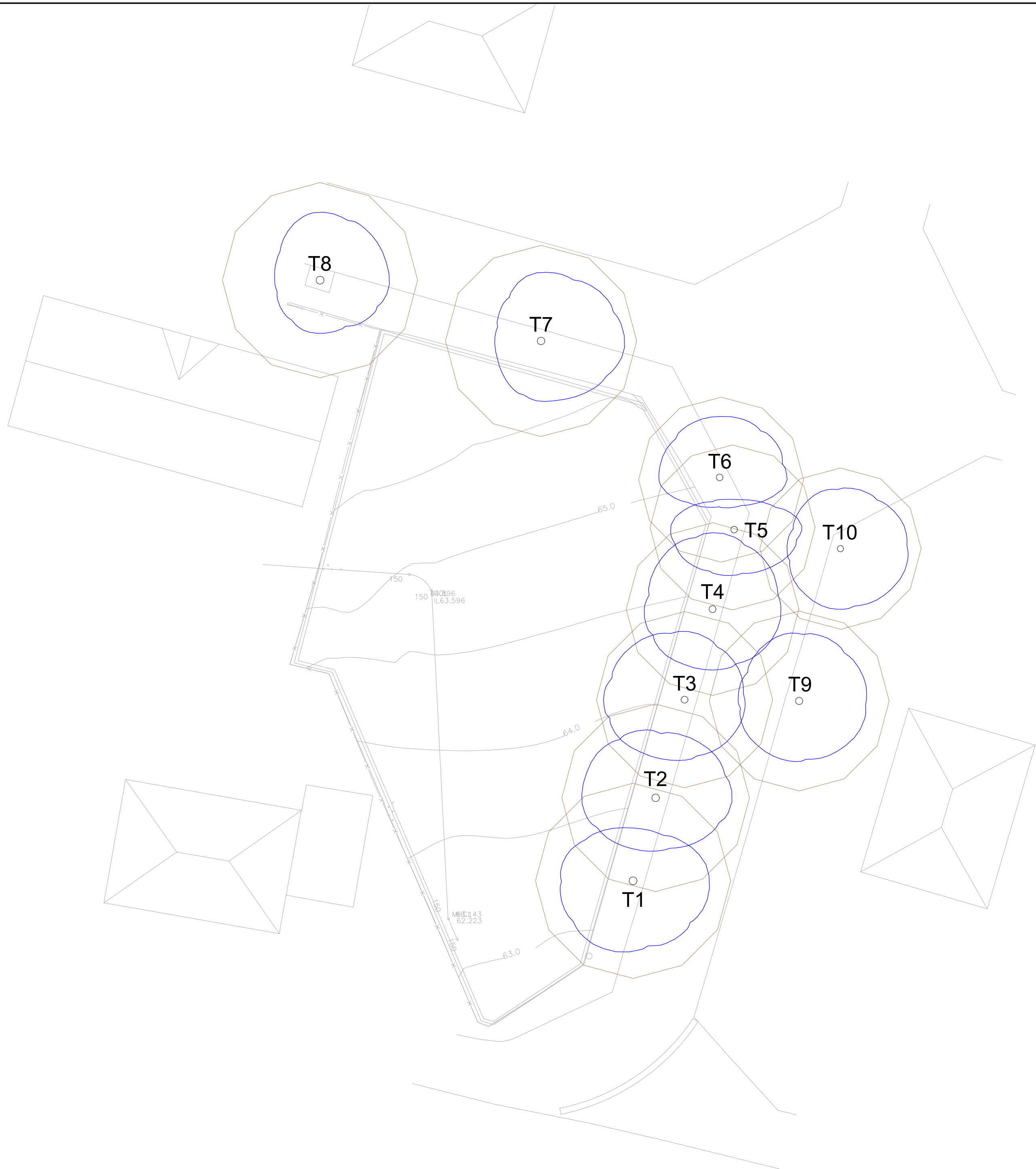
U (marked in red on Appendix 5) = trees for removal. These trees are in such a condition that any existing value would be lost within 10 years.

Appendix 4: Tree Data

	Tree Species		Measurements										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	Physiology	Structural	Life Expectancy	Amenty	Category	Works
T1	Lime	Tilia x europaea	Early mature	14	1	520	No	4	4	5	5	4	No visual defects. Tarmac up to base showing crack damage.	Single stemmed, Vertical, Bark damage, Epicormic growths, Tight union, Old pruning wounds	Normal. Previously pollarded at 6m.	Bark damage to south side of main stem from base to 1.5m.	Fair	Fair	20 to 40 yrs	High/ Mod	B	No works required
T2	Lime	Tilia x europaea	Early mature	13	1	500	No	4	5	5	4	5	No visual defects. Tarmac up to base showing crack damage.	Single stemmed, Vertical, Epicormic growths, Old pruning wounds	Normal. Previously pollarded at 6m.	Next to street light.	Good	Good	20 to 40 yrs	High/ Mod	B	No works required
T3	Lime	Tilia x europaea	Early mature	14	1	470	No	5.5	5	4	4	5	No visual defects. Tarmac up to base showing crack damage.	Single stemmed, Vertical, Epicormic growths, Old pruning wounds, Tight union	Normal. Previously pollarded at 6m.	Next to street light.	Good	Good	20 to 40 yrs	High/ Mod	B	No works required
T4	Lime	Tilia x europaea	Early mature	14	1	460	No	5.5	5	5	4	5	No visual defects. Tarmac up to base showing crack damage.	Single stemmed, Vertical, Epicormic growths, Old pruning wounds, Tight union	Normal. Previously pollarded at 6m.	Displacing kerb stone.	Good	Good	20 to 40 yrs	High/ Mod	B	No works required

	Tree Species		Measurements										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	Physiology	Structural	Life Expectancy	Amenity	Category	Works
T5	Lime	Tilia x europaea	Early mature	14	1	440	No	5	2	5	3	4	No visual defects. Tarmac up to base showing crack damage.	Single stemmed, Vertical, Epicormic growths, Old pruning wounds	Normal. Previously pollarded at 6m.	Phone line through canopy.	Good	Good	20 to 40 yrs	High/ Mod	B	No works required
T6	Lime	Tilia x europaea	Early mature	13	1	440	No	5	4	5	2	4	No visual defects. Tarmac up to base showing crack damage.	Single stemmed, Vertical, Epicormic growths, Old pruning wounds, Tight union	Normal. Previously pollarded at 6m.	Phone line through canopy.	Good	Good	20 to 40 yrs	High/ Mod	B	No works required
T7	Lime	Tilia x europaea	Early mature	14	1	510	No	5	5	6	4	3	No visual defects. Tarmac up to base showing crack damage.	Single stemmed, Vertical, Epicormic growths, Old pruning wounds, Tight union	Normal. Previously pollarded at 6m.	Street light through crown.	Good	Good	20 to 40 yrs	High/ Mod	B	No works required
T8	Lime	Tilia x europaea	Early mature	13	1	520	No	4.5	5	5	4	3	No visual defects	Single stemmed, Vertical, Epicormic growths, Old pruning wounds, Tight union	Normal. Previously pollarded at 6m.	Tree in planting pit.	Good	Good	20 to 40 yrs	High/ Mod	B	No works required
T9	Lime	Tilia x europaea	Early mature	14	1	480	No	4.5	5	5	4	4	No visual defects. Tarmac up to base showing crack damage.	Single stemmed, Vertical, Epicormic growths, Old pruning wounds, Tight union	Normal. Previously pollarded at 6m.	Phone line through canopy.	Good	Good	20 to 40 yrs	High/ Mod	B	No works required

	Tree Species		Measurements										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	Physiology	Structural	Life Expectancy	Amenity	Category	Works
T10	Lime	Tilia x europaea	Early mature	13	1	430	No	4	4	5	4	4	No visual defects. Tarmac up to base showing crack damage.	Single stemmed, Vertical, Epicormic growths, Old pruning wounds, Tight union, Minor cavities, Minor decay	Normal. Minor deadwood Previously pollarded at 6m.	Phone line through canopy. Lower limbs removed resulting in minor cavities.	Fair	Fair	20 to 40 yrs	High/ Mod	B	No works required





Appendix 5:
Tree Constraints Plan
South Street, Darfield, Barnsley
Ref: AWA2193/A

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

