



ARBORICULTURAL REPORT & Impact Assessment to BS5837:2012 at:

*Land at
**Fieldside Road,
Goldthorpe,
Barnsley,
South Yorkshire
S63 9LX***

Prepared for:
JK Planning and Design Service Ltd,
*6 Fair Holme View,
Armthorpe,
Doncaster,
South Yorkshire
DN3 3TW*

Date: *July 2018*

Reference: AWA2273



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1. Introduction

1.1 Instructions and Brief

- 1.1.1 We are instructed by Jason Kirk of JK Planning and Design Services Ltd to visit the site and prepare our findings in a report.
- 1.1.2 The report is required in accordance with *BS 5837:2012 Trees in relation to design, demolition and construction – Recommendations*, to provide detailed, independent, arboricultural advice on the trees present, in the context of potential development.

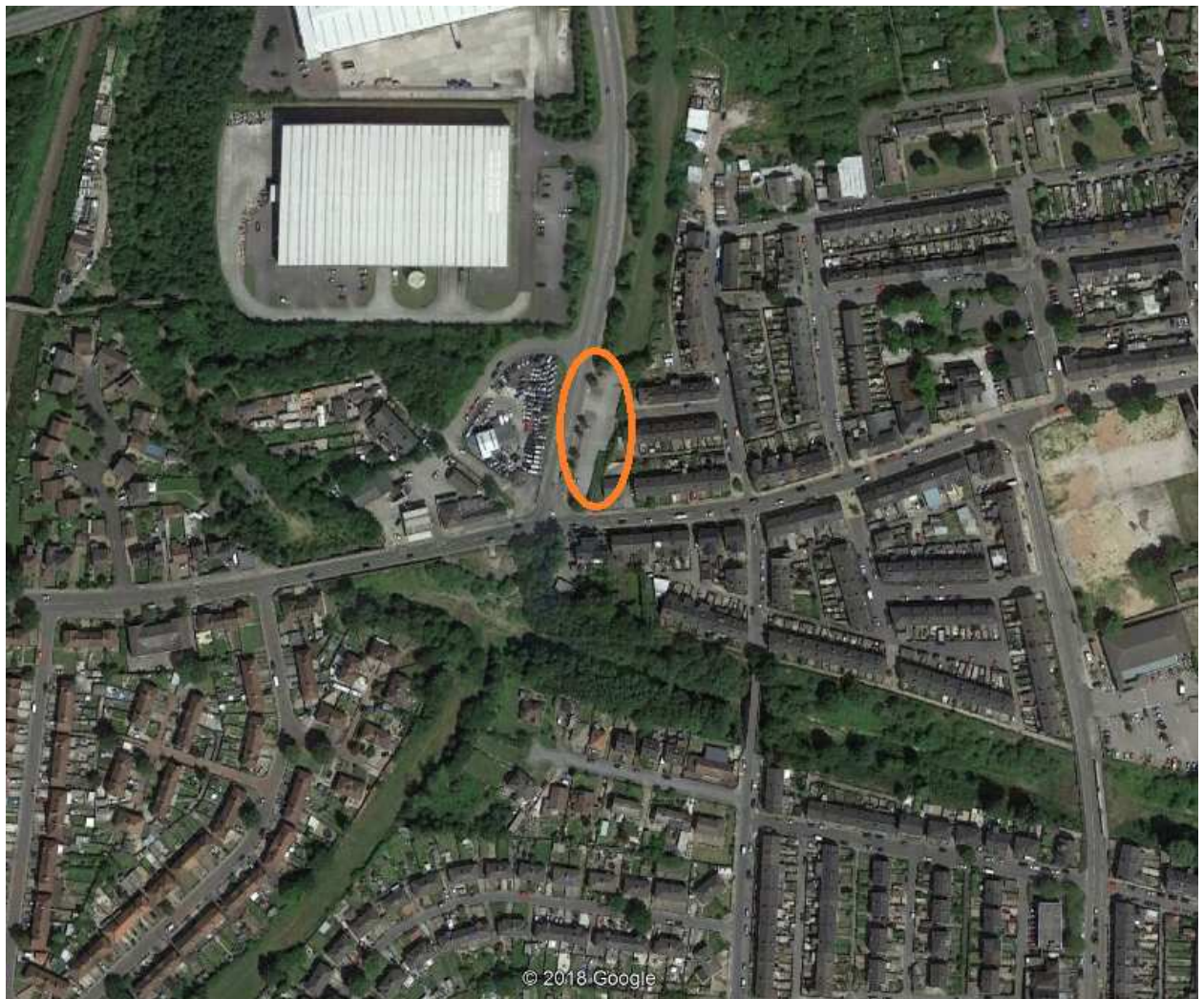
1.2 Survey Details

- 1.2.1 The survey took place during July 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 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.
- 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 Goldthorpe, a village within the Metropolitan Borough of Barnsley, in South Yorkshire, 7 miles to the east of Barnsley town centre.
- 2.1.2 The site is currently a public car park, with commercial properties to the west, residential properties to the east and south and a narrow strip of public grazing land to the north.
- 2.1.3 The approximate area of the survey is 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 7 items of woody vegetation, comprised of 7 individual trees.
- 3.2.2 Of the surveyed trees: 1 tree is retention category 'B', and the remaining 6 trees are retention category 'C' (explanatory details regarding the retention categories are included within Appendix 3).
- 3.2.3 The tree cover within the site consists of individual trees close to or beyond the site boundaries.
- 3.2.4 The central area of the site contains nothing of arboricultural significance, generally consisting of car parking spaces and areas of low shrubs.
- 3.2.5 Species diversity at the site is relatively poor. The dominant tree species is Norway Maple with the occasional Sycamore and Swedish Whitebeam. Most of the trees are semi mature to early mature.
- 3.2.6 Close to the southern site boundary is a Swedish Whitebeam tree planted in a 2m x 2m planting bed (T1). This tree is visually prominent from both within the site and the surrounding areas, being close to a wide road junction. It provides some moderate amenity value and is suitable for retention within any future development.

- 3.2.7 At the northern end of the site is a row of Norway Maple trees (T2 – T6). These are generally in a fair or poor condition, several of them having suffered from damage caused by a fire at the edge of the car park. The two trees, T4 and T5 have particularly sparse crowns and a high proportion of deadwood. These two trees may be unsuitable for retention in the longer term regardless of any future development.
- 3.2.8 Beyond the north east corner of the site is a mature Sycamore tree that has been preciously topped at 2m (T7). This tree has some significant defects; however, it provides some visual amenity and screening between the site and the residential properties beyond.
- 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) 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 management) the RPA is likely to be a simplified representation of the tree roots actual morphology and disposition.

4. Arboricultural Impact Assessment

4.1 Proposed New Development

- 4.1.1 It is proposed to build a new residential development of 9 properties with associated access, parking, landscaping and facilities. The development proposals have been provided by my client and inform this arboricultural impact assessment and the Tree Impacts Plan at Appendix 6.

4.2 Direct Impacts

- 4.2.1 From assessing the new development proposals, 4 trees will require removal as they are situated in the footprint of the structure or their retention and protection throughout the development is not suitable.
- 4.2.2 The trees that require removal are T2, T3, T4 and T5.

- 4.2.3 The trees that require removal are all low value, retention category 'C'. Trees T2 and T3 are Maple trees with defects that limit their value and long-term prospects. Trees T4 and T5 have sparse crowns with extensive deadwood and dieback and are only of negligible arboricultural value.
- 4.2.4 Due to the low value of the trees to be removed the removals will have only a negligible negative arboricultural impact.

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 Development activities are proposed in the vicinity of retained trees. The new development 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 the topography and surrounding structures and hard-surfaces. 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 New landscaping is proposed that encroaches into the edge of the RPA of T6 and T7. The construction of hard surfaces within the RPA can have negative impacts on tree roots. However, the encroachment is very minor, and as such, it is unlikely that significant roots will be within this area and the retained trees should remain largely unaffected by the works, provided care is taken during construction.
- 4.3.4 The design of the new development has considered the trees crown position in relation to the dwellings. 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.
- 4.3.5 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 In this instance, if acceptable to the Local Authority, a suitable level of tree protection could be provided through robust site boundary fencing/ site hoardings.
- 4.5.3 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.

10th July 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.

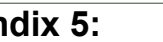
U (marked in red on Appendix 5) = trees for removal. These trees are in such a condition that any existing value would be lost within 10 years.

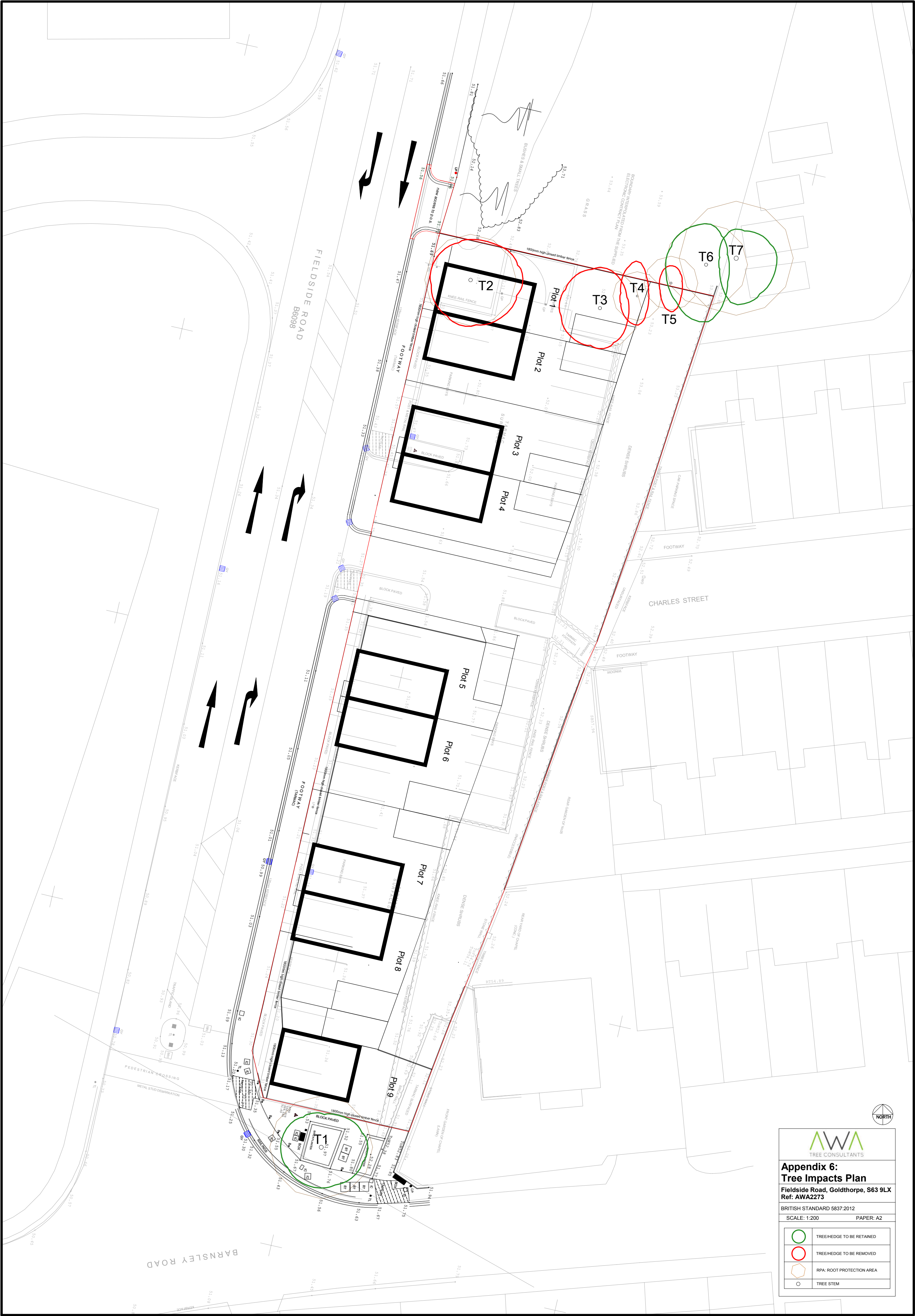
Appendix 4: Tree Data

Tree 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	Sorbus	<i>Sorbus intermedia</i>	Early-mature	7	1	360	No	2	3	4	3.5	3.5	No visual defects	Single stemmed, Vertical, Tight union, Stubs	Normal	Situated in 2m x 2m planting bed.	Good	Good	>40 yrs	Moderate	B	No Works
T2	Maple	<i>Acer platanoides</i>	Semi-mature	8.5	3	260, 150, 110	No	1	3.5	4.5	4	3.5	Soil erosion, Exposed roots, Damage to buttress roots	Multiple stemmed at base, Vertical, Stubs, Tight union	Normal, Minor deadwood	Ash saplings at base.	Good	Fair	20 to 40 yrs	Moderate	C	Remove to facilitate new development
T3	Maple	<i>Acer platanoides</i>	Semi-mature	9	1	290	No	2	3.5	2.5	3.5	3.5	No visual defects, Exposed roots	Single stemmed, Vertical, Stubs, Tight union	Minor dieback, Moderate deadwood, Unbalanced	Minor fire damage to south west of canopy due to recent fire at car park edge.	Fair	Fair	20 to 40 yrs	Moderate	C	Remove to facilitate new development
T4	Maple	<i>Acer platanoides</i>	Semi-mature	9	1	170	No	4	3	1	2.5	1.5	No visual defects	Single stemmed, Vertical, Stubs, Tight union	75% dead / absent, Major dieback, Moderate deadwood	Extensive fire damage to south and eastern canopy due to recent fire at car park edge. Very limited live crown remaining.	Poor	Poor	<10 yrs	Low	C	Remove to facilitate new development
T5	Maple	<i>Acer platanoides</i>	Semi-mature	8.5	1	188	No	3	1.5	1	2.5	1	No visual defects	Single stemmed, Vertical, Epicormic growths, Old pruning wounds, Bark damage	50% dead / absent, Moderate dieback, Moderate deadwood	Limited live growth remaining. Sparse canopy due to fire damage and dense creepers that have been severed at base.	Poor	Fair	<10 yrs	Low	C	Remove to facilitate new 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	Maple	<i>Acer platanoides</i>	Semi-mature	9	1	290	No	1.5	3.5	2	5	3.5	No visual defects	Multiple stemmed at 2m, Vertical, Epicormic growths, Old pruning wounds, Stubs, Bark damage, Minor cavities	Normal, Minor deadwood	Historic wound at 1.5m from snapped out branch.	Fair	Fair	20 to 40 yrs	Moderate	C	Crown lift southern canopy to 2.5m to facilitate new development
T7	Sycamore	<i>Acer pseudoplatanus</i>	Early-mature	10	4	230, 220, 180, 160	Yes	1.5	2.5	3.5	4	1.5	No visual defects	Multiple stemmed at base, Slight lean, Epicormic growths, Old pruning wounds, Stubs, Bark damage, Tight union, Partially included bark, Minor cavities	Old pruning wounds, Minor deadwood	Situated in adjacent land with no access. Previously topped at 2m.	Fair	Fair	20 to 40 yrs	Moderate	C	No Works



	
Appendix 5: Tree Constraints Plan	
Fieldside Road, Goldthorpe, S63 9LX Ref: AWA2273	
BRITISH STANDARD 5837:2012 RETENTION CATEGORIES Definitions of these categories can be found in Appendix 2 of the report.	
SCALE: 1:200	PAPER: A2
	CATEGORY A: HIGH VALUE RETENTION MOST DESIRABLE
	CATEGORY B: MODERATE VALUE RETENTION DESIRABLE
	CATEGORY C: LOWER VALUE COULD BE RETAINED
	CATEGORY U: FOR REMOVAL
	RPA: ROOT PROTECTION AREA
	TREE STEM





Appendix 6:
Tree Impacts Plan

Fieldside Road, Goldthorpe, S63 9LX
Ref: AWA2273

BRITISH STANDARD 5837:2012

SCALE: 1:200 PAPER: A2

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