TREE CONSULTANTS

ARBORICULTURAL REPORT

& Impact Assessment

To **BS5837:2012** at:

Land Adj. 31 Roman Road,
Darton,
Barnsley,
South Yorkshire,
S75 5DE

Prepared For:
JDA Associates Ltd
Fernwood
Woore Road
Onneley
Crewe
CW3 9QJ

Date: *October 2016*
Reference: *AWA1698*

Institute of Chartered Foresters
Registered Consultant

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Union Forge, 27 Mowbray Street, Sheffield, S3 8EN. AWA Tree Consultants Limited. Company No. 8520123. Registered in England & Wales.

Contents

1. Introduction

1.1 Instructions and Brief

1.1.1 We are instructed by JDA Associates 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 October 2016.

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 author's 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 Darton, a large village in the metropolitan borough of Barnsley, South Yorkshire.

2.1.2 The site is a residential garden area, surrounded by neighbouring houses.

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 6 items of woody vegetation, comprised of 4 individual trees and 2 hedge groups.

3.2.2 Of the surveyed trees: 1 tree is retention category 'B', and the remaining 5 trees or groups 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 mainly of boundary hedges with a small number of individual trees situated in the hedges and on adjacent land. The central areas of the site contain little of arboricultural significance, consisting of either lawn areas or unmanaged grassland.

3.2.4 The western area boundary has a managed Beech hedge G5 and an unmanaged Privet hedge G6. The hedges are unremarkable, but they offer some screening value.

3.2.5 A mature Goat Willow T1 is situated within the Beech hedge G5, to the south of the site. The tree is unsuitable for retaining in close proximity to a new development due to structural defects. The tree has a large split in the fork supporting two large branches at 2m, and as such the tree has limited long term prospects due to the high likelihood of the union failing in the future.

3.2.6 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.

3.2.7 The tree Root Protection Area (RPA) detailed on the Tree Constraints Plan at Appendix 5, is 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.

3.2.8 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 three new houses and associated 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, two trees (T1 and T3) and a section of the hedge (G5) will require removal, as they are situated in the footprint of the structure or their retention and protection throughout the development is not suitable. In addition, the hedge groups G5 and G6 will require cutting back the oh growth back to the boundary. It is likely the hedge groups will tolerate this work.

4.2.2 All of the trees that require removal are lower value, retention category 'C'. The removal of the small Cherry (T3) and the surrounding shrubs and saplings are of little consequence as they are all small low value trees and shrubs with little amenity value. The removal of the larger Willow (T1) will have a minor negative visual impact and a loss of visual amenity in the short term.

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. Potentially damaging activities are proposed in the vicinity of retained trees. New hard landscaping and fences are proposed that encroach close to and into the edge of the RPA of G5 and G6. While the encroachment is minor, 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.

4.3.2 The design of the new development has considered the retained tree's 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.

4.4 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 may 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

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

12th October 2016

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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: Arboricultural Impacts Plan

Appendix 1: Authors Qualifications & Experience

Mr Adam Winson *Chartered Arboriculturist, MSc, BSc (Hons), ND, MICFor, ACIEEM.*

Experience
I have worked within the tree care profession for 20 years. I am a Chartered Arboriculturist and a Registered Consultant with the Institute of Chartered Foresters. My work ranges from individual expert tree inspections to managing trees on major multimillion pound housing and park developments and highway and infrastructure projects. My work often involves trees with Preservation Orders, insurance claims, subsidence claims and litigation. In 2010 I obtained an MSc in Arboriculture and Urban Forestry (with distinction), also gaining the top student award, and have had articles published in industry magazines and have original research published by the UK Forestry Commission.

Membership of Professional Bodies
Professional Member and Registered Consultant of the Institute of Chartered Foresters
Associate of the Chartered Institute of Ecology and Environmental Management
Associate of the Arboricultural Association

Qualifications
MSc Arboriculture and Urban Forestry (Distinction)
BSc (Hons) Environmental Conservation
National Diploma in Arboriculture

Mr Guy Baxter *FdSc (Arb). ND Arb. TechArborA*

Experience
I have worked within the tree care profession for 7 years and joined AWA Tree Consultants in April 2015. My work focuses on undertaking BS5837:2012 tree surveys for development projects; this involves tree inspections, the preparation of Tree Reports, Arboricultural Impact Assessments and Tree Protection Schemes to BS 5837:2012. While working full time, I am currently in my final stages of a part-time BSc Hons Degree in Arboriculture and Urban Forestry at the University of Central Lancashire, and am working towards becoming a Chartered Arboriculturist with the Institute of Chartered Foresters.

Membership of Professional Bodies
Associate Member of the Institute of Chartered Foresters
Technician Member of the Arboricultural Association

Qualifications
FdSc (Arb) Foundation Degree in Science (Arboriculture)
Level 3 Extended National Diploma in Arboriculture and Forestry

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 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 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*	*Physiology*	*Structural*	*Life Expectancy*	*Amenity*	*Category*	*Works*
T1	Willow	*Salix caprea*	Mature	10	1	650	No	3	5	6	4	4	Limited access around base. No visual defects	Twin stemmed at 2m. Fork supporting two large main branches at 2m split and failing. Old pruning wounds. Major cavity. Minor decay.	Normal. Minor deadwood. Overhanging adjacent land.	Limited long term value. Not suitable within close proximity to a new development.	Fair	Poor	10 to 20 yrs	Mod	**C**	Removal required to facilitate new development
T2	Rowan	*Sorbus aucuparia*	Mature	11	1	380	Yes	4	3	2	4	2	No visual defects	Multiple stemmed at 2m. Vertical. Old pruning wounds. Stubs.	Normal	Situated on adjacent land. No access.	Good	Good	>40 yrs	Mod	**B**	No works required
T3	Cherry	*Prunus avium*	Semi-mature	4	2	270, 150	No	1	2	2	2	2	No visual defects	Twin stemmed at base. Vertical. Tight union.	Normal. Overhanging adjacent land.	Close to boundary.	Fair	Fair	20 to 40 yrs	Low	**C**	Removal required to facilitate new development
T4	Prunus	*Prunus padus*	Early-mature	7	1	350	Yes	3	2	3	2	3	No visual defects	Twin stemmed at 2m. Stubs. Old pruning wounds. Vertical.	Normal. Slightly unbalanced. Minor deadwood.	Previously topped at 7m. No access. Situated on adjacent land.	Fair	Fair	20 to 40 yrs	Low	**C**	No works required
G5	Beech	*Fagus sylvatica.*	Early-mature	3	1	80	Yes	0	See plan				Well managed hedge. Good screening value. Occasional Elder and Holly within hedge.				Good	Good	20 to 40 yrs	Low	**C**	Partial removal required to facilitate new development
G6	Privet	*Ligustrum ovalifolium*	Mature	3	1	100	Yes	0	See plan				Unmanaged boundary hedge.				Good	Good	20 to 40 yrs	Low	**C**	Cut back overhanging branches to boundary

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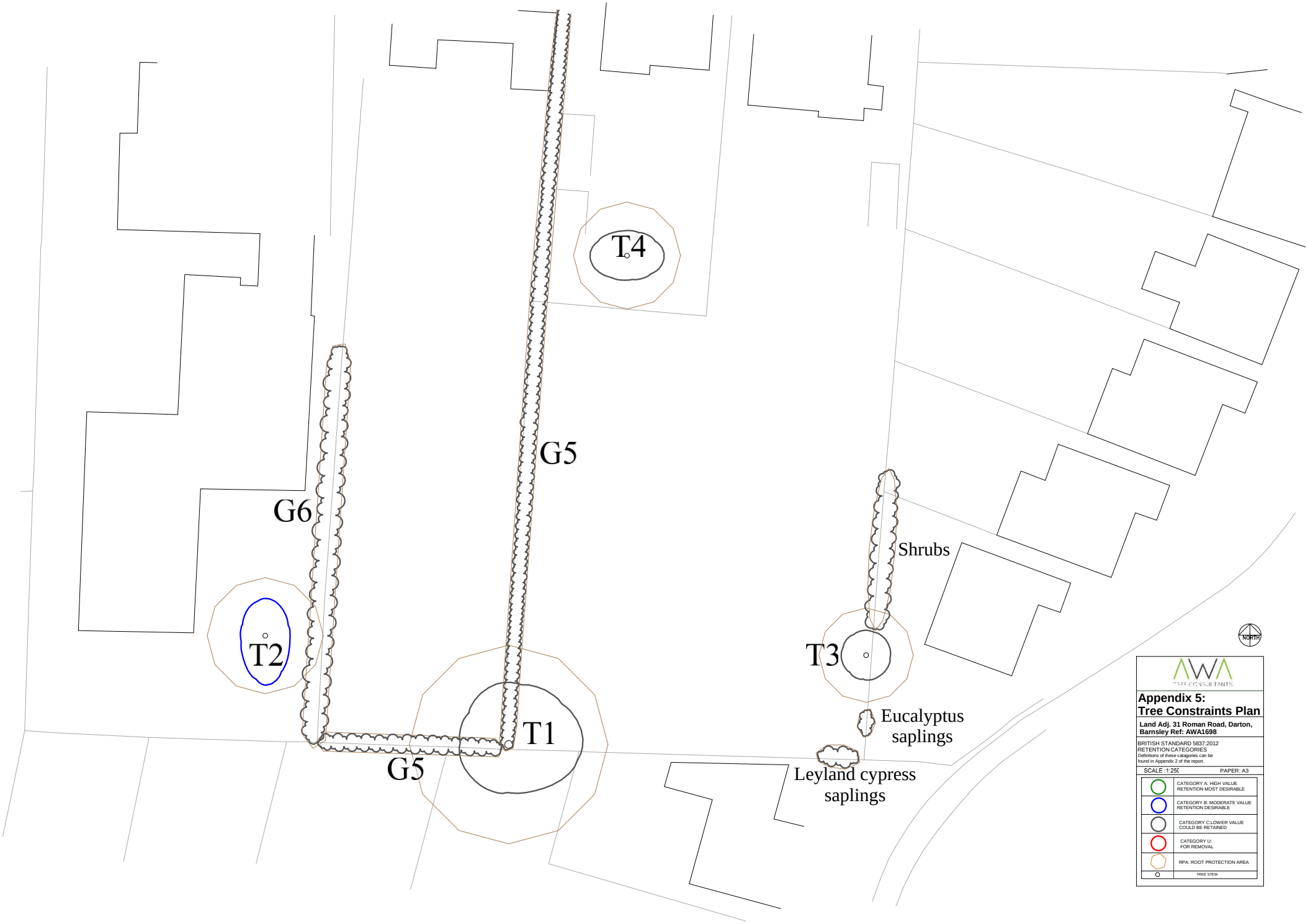
T4
G5
G6
T2
T1
G5
T3
Shrubs
Eucalyptus saplings
Leyland cypress saplings
NORTH
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Appendix 5:
Tree Constraints Plan
Land Adj. 31 Roman Road, Darton, Barnsley Ref: AWA1698
BRITISH STANDARD 5837:2012
RETENTION CATEGORIES
Definitions of these catagories can be found in Appendix 2 of the report.
SCALE :1:250
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


T4
G5
G6
Shrubs
T2
T3
T1
G5
Eucalyptus saplings
Leyland cypress saplings
BIN COLLECTION
NORTH
Appendix 6:
Tree Impacts Plan
Land Adj. 31 Roman Road, Darton, Barnsley Ref: AWA1698
BRITISH STANDARD 5837:2012
SCALE 1:250
PAPER: A3
TREE/HEDGE TO BE RETAINED
TREE/HEDGE TO BE REMOVED
RPA: ROOT PROTECTION AREA
TREE SYTEM