



ARBORICULTURAL REPORT & Impact Assessment to BS5837:2012 at:

*Land at
**Heysham Green
Barnsley
South Yorkshire
S71 2RP***

Prepared for:
Allert Building Contractors Ltd
C/O KSL Design Ltd
*Elsecar
Barnsley
S74 8HX*

Date: *February 2019*

Reference: *AWA2581*



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1. Introduction

1.1 Instructions and Brief

- 1.1.1 We are instructed by Karl Leatham of KSL Design Ltd on behalf of Allert Building Contractors 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.

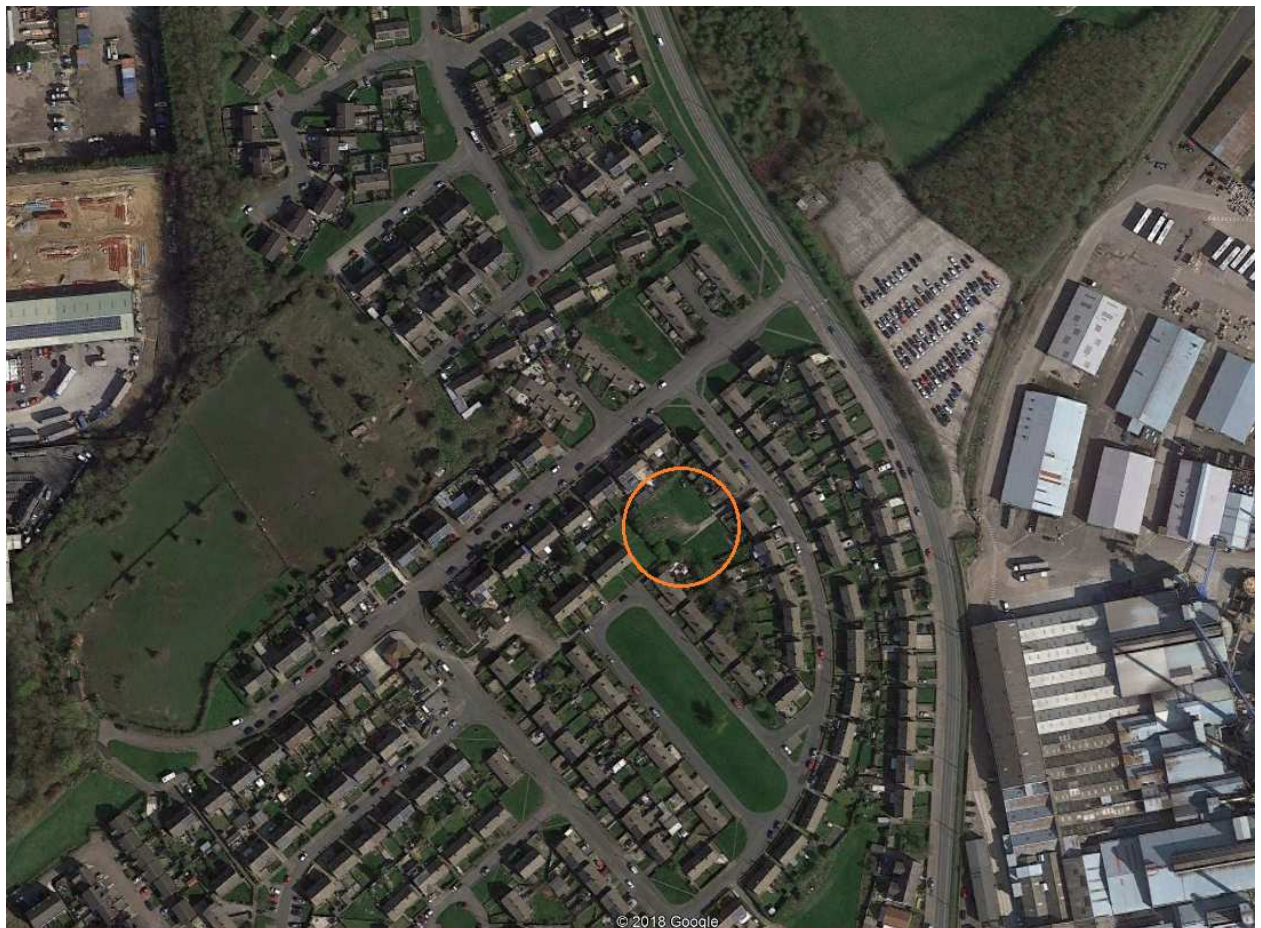
1.2 Survey Details

- 1.2.1 The survey took place during 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 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 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 Monk Bretton, a village in the Metropolitan Borough of Barnsley, approximately two miles north-east from Barnsley town centre in South Yorkshire.
- 2.1.2 The site comprises a parcel of open grassland between several residential gardens. A footpath passes through the site from east to west and the eastern entrance has been used for vehicular access into the site.
- 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 13 items of woody vegetation, comprised of 8 individual trees and 5 groups of trees or hedges.
- 3.2.2 Of the surveyed trees: All 8 trees and 5 groups are lower value 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 small to moderate sized trees, shrubby tree groups and hedges close to the boundary lines, both within the site and in the surrounding residential gardens.
- 3.2.4 The central area of the site contains nothing of arboricultural significance, generally consisting of open grassland.
- 3.2.5 Species diversity at the site is fair, with several Cherry, Hawthorn and Sycamore and the occasional Elder and Laburnum.
- 3.2.6 Most of the trees are semi-mature with one young tree group and several early-mature trees.
- 3.2.7 All trees at the site are lower value retention category 'C'. No individual tree should pose a significant constraint to the future development of the site. Collectively provide some minor amenity value and some screening

between the site and the surrounding residential gardens.

- 3.2.8 Some trees were inaccessible (as detailed in Appendix 4). In such cases measurements were estimated and the condition values are indicative only.
- 3.2.9 The largest tree within the site is the early mature Sycamore, T1. This tree has several significant defects that limit its longer-term value and suitability for retention within any future development.
- 3.2.10 Towards the south of the site are several Cherry trees, G2, T6 and T7. These self-set trees have only recently established and are of negligible arboricultural value.
- 3.2.11 The hedge groups within the site are predominantly Sycamore or Hawthorn, G5, G10 and G11. All three groups have been previously managed at a much smaller height and spread than their current size. If deemed appropriate to keep these groups within any future development, they will need regular management to retain their suitability.
- 3.2.12 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.
- 3.2.13 The lower value tree and hedge 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.
- 3.2.14 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 residential development of five properties with associated access, vehicle parking, landscaping and facilities.
- 4.1.2 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, 3 trees and 3 hedge groups 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 and hedges that require removal are T1, G5, T6, T7, G10 and G11.
- 4.2.3 The trees that require removal are all lower value, retention category 'C'. T1 is a larger Sycamore tree with significant defects and possible fire damage, G5, G10 and G11 are low value overgrown hedgerows that would require significant management works to maintain their suitability, and T6 and T7 are a group of recently established self-set Cherry trees with little 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 The design of the new development has considered the trees' crown position in relation to the development. 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.

- 4.3.3 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.

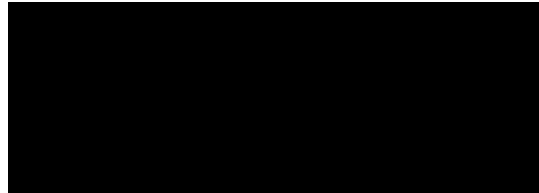
4.5 Protection of the Retained Trees

- 4.5.1 The retained trees may require protection by fencing in accordance with BS 5837: 2012, during the development phase. The protective fencing for this site should be located to protect the RPAs of the retained trees as detailed on the attached Tree Impacts Plan at Appendix 6.
- 4.5.2 The final fencing position should be agreed on by the LPA before the commencement of any site works. The protective fencing will be appropriate to the degree and proximity of likely construction works. In this instance, it is suggested (if acceptable by the LPA) an adequate level of protection for the trees could be provided by 'Heras' type fencing, of welded mesh panels on rubber or concrete feet.
- 4.5.3 The area enclosed by the fencing is referred to as the Construction Exclusion Zone (CEZ); this area should be considered a restricted area. No pedestrians, vehicles, storage of materials, equipment or machinery should be allowed within the CEZ. The site manager must ensure that all personnel are aware of the restrictions that apply to the fenced-off area.

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.*

27th February 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. *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 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	Sycamore	<i>Acer pseudoplatanus</i>	Early-mature	15	1	470	No	2	4.5	5	4.5	3	No visual defects	Twin stemmed at 3m, Vertical, Old pruning wounds, Bark damage, Tight union, Minor cavities	Normal, Minor deadwood	Large area of historic bark damage at base, possibly fire damage. Many minor cavities on stem and in crown from previously removed/ snapped branches.	Fair	Fair	20 to 40 yrs	Moderate	C	Remove to facilitate development
G2	Cherry	<i>Prunus sp.</i>	Young	7	10+	70 avg	No	1	See Plan				No visual defects	Multiple stemmed at base, Vertical, Stubs, Bark damage, Minor cavities	Normal	Area of low value natural regeneration.	Good	Fair	20 to 40 yrs	Low	C	No works required - could be removed with no arboricultural impacts
T3	Cherry	<i>Prunus sp.</i>	Early-mature	9	2	320, 270	Yes	2	2	3.5	3	2.5	No visual defects, Limited access around base	Twin stemmed at base, Vertical, Old pruning wounds, Stubs, Tight union	Minor dieback, Minor deadwood	Situated in adjacent land with no access. Previously topped at 6m.	Fair	Fair	10 to 20 yrs	Low	C	No works required
T4	Cherry	<i>Prunus sp.</i>	Early-mature	10	1	310	Yes	2	3.5	3	3	3	No visual defects, Limited access around base	Single stemmed, Vertical, Old pruning wounds, Stubs	Normal, Minor deadwood	Situated in adjacent land with no access.	Fair	Good	20 to 40 yrs	Moderate	C	No works required
G5	Sycamore	<i>Acer pseudoplatanus</i>	Semi-mature	6.5	10+	100 avg	No	1	See Plan				No visual defects	Single & Multiple stemmed at base, Vertical, Old pruning wounds, Stubs, Ivy covered	Minor dieback, Minor deadwood	Linear group of stems, previously topped at 2m. Green waste piled at base to south of group.	Fair	Fair	10 to 20 yrs	Low	C	Remove to facilitate 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	Cherry	<i>Prunus sp.</i>	Semi-mature	7	3	130, 100, 90	No	1	2	3.5	3.5	2	No visual defects	Multiple stemmed at base, Slight lean, Old pruning wounds, Stubs, Tight union, Partially included bark	Unbalanced, Minor deadwood	Growing at base of boundary fence.	Good	Fair	20 to 40 yrs	Low	C	Remove to facilitate development
T7	Cherry	<i>Prunus sp.</i>	Semi-mature	7	2	100, 80	No	1	2	2.5	2	1	No visual defects	Multiple stemmed at base, Slight lean, Old pruning wounds, Stubs, Tight union, Partially included bark	Unbalanced, Minor deadwood	Growing at base of boundary fence.	Good	Fair	20 to 40 yrs	Low	C	Remove to facilitate development
T8	Hawthorn	<i>Crataegus monogyna</i>	Semi-mature	8	6	120 avg	Yes	1.5	3	3	3	2.5	No visual defects, Limited access around base	Multiple stemmed, Vertical, Stubs, Old pruning wounds, Tight union, Partially included bark	Normal, Minor deadwood	Situated in adjacent land with no access.	Good	Fair	>40 yrs	Moderate	C	No works required
T9	Cherry	<i>Prunus sp.</i>	Semi-mature	8	1	140	Yes	2.5	2	1.5	2	2	No visual defects, Limited access around base	Single stemmed, Vertical, Old pruning wounds	Normal	Situated in adjacent land with no access.	Good	Good	20 to 40 yrs	Low	C	No works required
G10	Hawthorn	<i>Crataegus monogyna</i>	Semi-mature	6.5	10+	110 avg	No	1.5	See Plan				No visual defects, Soil compaction	Single & Multiple stemmed at base, Vertical, Old pruning wounds, Tight union, Partially included bark	Normal, Minor deadwood	Unmanaged boundary hedge. Occasional Cherry & Elder.	Fair	Good	>40 yrs	Moderate	C	Remove to facilitate 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
G11	Hawthorn	<i>Crataegus monogyna</i>	Semi-mature	7.5	10+	110 avg	No	1.5	See Plan				No visual defects, Soil compaction	Single & Multiple stemmed at base, Vertical, Old pruning wounds, Tight union, Partially included bark	Normal, Minor deadwood	Unmanaged boundary hedge. Some recent fire damage to centre of group on eastern side.	Fair	Good	>40 yrs	Moderate	C	Remove to facilitate development
T12	Laburnum	<i>Laburnum anagyroides</i>	Early-mature	10	2	350, 320	Yes	2.5	3	2.5	3.5	3.5	No visual defects, Limited access around base	Twin stemmed, Slight lean, Old pruning wounds, Stubs, Tight union	Normal, Minor deadwood	Situated in adjacent land with no access.	Good	Fair	20 to 40 yrs	Moderate	C	No works required
G13	Hawthorn	<i>Crataegus monogyna</i>	Semi-mature	6	6	100 avg	Yes	2	See Plan				No visual defects, Limited access around base	Single & Multiple stemmed, Vertical, Old pruning wounds, Stubs, Epicormic growths, Tight union, Partially included bark	Old pruning wounds, Minor deadwood	Situated in adjacent land with no access. 3 trees forming one crown.	Fair	Fair	20 to 40 yrs	Low	C	No works required





Appendix 5:
Tree Constraints Plan
Heysham Green, Barnsley, S71 2RP
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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
Heysham Green, Barnsley, S71 2RP
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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



NORTH