



ARBORICULTURAL METHOD STATEMENT

to BS 5837:2012 at:

***Land off Barnsley Road,
Denby Dale,
Huddersfield,
HD8 8XA***

This document describes how the trees will be protected and managed during the development of this site. It explains how and when the protection measures must be installed and maintained throughout the development.

A copy of this document report must be permanently available on site for the duration of all development activity and should be referenced for practical guidance on how to protect the retained trees at this site.

Prepared for:
Strata

Date: *November 2021*

Reference: AWA4005



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1. Introduction

1.1 Instruction

1.1.1 We have been instructed by Strata to prepare an arboricultural method statement for the proposed development at:

- **Land off Barnsley Road, Denby Dale, Huddersfield, HD8 8XA**

1.2 Purpose

1.2.1 This method statement has been prepared in order to demonstrate that the development operations at this site can be undertaken with minimal risk of adverse impact on the trees to be retained.

1.2.2 This method statement conforms to BS 5837:2012 *Trees in relation to design, demolition and construction - Recommendations*. It is based on the arboricultural data, collected at a site visit during August 2021, detailed within Appendix 4 of this report.

1.3 Description of Development

1.3.1 It is proposed to build a new residential development with associated access, landscaping and facilities. The proposed development layout has been provided by my client and is the basis for the Tree Protection Plan (TPP) at Appendix 5.

1.4 Details of Consent

1.4.1 Planning consent is subject to this method statement being agreed upon in advance by the Local Planning Authority. The contents of this report must be adhered to, before, during, and after the construction phase.

1.4.2 As such, no equipment, machinery or materials shall be brought onto the site in connection with the development until this arboricultural method statement detailing tree management and tree protection measures has been submitted to and approved by the Local Planning Authority.

2. Method Statement Timeline

2.1 Overview of Sequence of Operations

2.1.1 In overview, it is necessary to undertake the following sequence of operations in relation to arboricultural input for development operations.

- 1 Method Statement approved by the LPA.
- 2 Undertake tree works as detailed in Appendix 4.
- 3 Install tree protective fencing.
- 4 Pre commencement meeting/confirm tree protection is as specified.
- 5 Construction of new development.
- 6 Removal of tree protection.

2.2 Specific Sequence of Operations

2.2.1 The following timeline table informs the key principles for development operations proceeding in relation to arboricultural requirements conditioned as part of this method statement.

2.2.2 The actions and timescales within this table must be adhered to in order to discharge the arboricultural method statement planning condition for this site.

2.2.3 The precise timing and order of some of the development operations may need to be changed due to site specific operational requirements, yet any operations that may affect the trees on the site must be done so under arboricultural supervision by a suitably qualified person appointed by the contractor.

Sequence of Operations		
Stages	Action	Arboricultural Input
1 Approval	This AMS is submitted to and approved in writing by the LPA.	If necessary, liaise with contractor and LPA to discuss methodologies detailed.
2 Tree Works	Tree removals and pruning works shall be carried out as the first operation on site, in accordance with Appendix 4 and as detailed in section 3.1.	Review the tree work requirements with the tree contractor. If necessary, liaise with the contractor on site during tree works.
3 Tree Protection	Installing the tree protective fencing will take place prior to any storage of plant, materials and machinery. As shown at Appendix 5.	If necessary, liaise with the contractor installing the protective fencing until completed to the standard specified in this method statement.
4 Site Meeting	Following installation of tree protection measures, the project Arboriculturist shall inspect the fencing, and tree works, and discuss any other site operations that have implications for trees.	Meeting with project Arboriculturist and the site manager. Alternatively, contractor can confirm the fencing, ground protection, and tree works are as specified by taking photographs of the tree protection measures.
5 Construction	Undertake the construction of the new development.	If necessary, liaise with the local authority and the site foreman to ensure any issues are adequately resolved.
6 Site Finishing	Removal of tree protective measures must only be undertaken when all site traffic and machinery has left the site.	The contractor can take photos of the site to give to the project Arboriculturist to confirm the removal of protective measures.

3. Tree Management

3.1 Tree Works

- 3.1.1 The development will require the removal of 17 trees and 4 groups – T1, T13, T15, T19, T20, T21, T22, T23, T28, T29, T30, G31, T32, T33, G34, T35, T42, G43, T44, T46 and T47.
- 3.1.2 G41 will require the removal of a 2m section at its western end to facilitate construction of a retaining wall. The removal will have negligible negative impact on the remaining hedge.
- 3.1.3 The trees and tree groups requiring removal are highlighted in red on the plan at Appendix 5 and as detailed in the tree data schedule at Appendix 4.
- 3.1.4 Pruning work is required to raise the crown height of G2, T4, and T25, and reduce the crowns of T6, T7, G8, G9 and G24 to facilitate construction of a new retaining wall.
- 3.1.5 All tree works are detailed in the tree data schedule at Appendix 4.
- 3.1.6 All tree work should be carried out according to British Standard 3998:2010 Tree Work - Recommendations.
- 3.1.7 When appointing a tree surgeon, only properly qualified and experienced companies should be used, who have adequate Public Liability and Employer's Liability Insurance.

4. Tree Protection

4.1 Tree Protection Fencing

- 4.1.1 The protective fencing for this site should be located as shown on the Tree Protection Plan (TPP) at Appendix 5. BS 5837:2012 fencing is illustrated with a thick purple line. 'Herras' type fencing is illustrated with a thick orange line.
- 4.1.2 The precise fencing location may need to be slightly adjusted on site due to local site conditions but is not expected to differ from that shown on the TPP. The final fencing position must be agreed on by the LPA

before the commencement of any site works.

- 4.1.3 The tree protective fencing details should be incorporated into relevant subsequent plans, method statements used for design purposes and construction drawings issued for use on site, to ensure that all interested parties are fully aware of the areas in which access and works may and may not take place.
- 4.1.4 The protective fencing will be appropriate to the degree and proximity of likely construction works. In this instance, the default BS 5837:2012 tree protection fencing is deemed an adequate level of protection for the trees along the eastern boundary.
- 4.1.5 The fencing should be joined using a minimum of two anti-tamper couplers, installed so that they can only be removed from inside the fence. The fencing panels should be supported on the inner side by stabilizer struts, which should normally be attached to a base plate secured with ground pins or mounted on a block tray (see Appendix 1 for an example).
- 4.1.6 Some fencing will need to be adjusted during development, following completion of drainage construction works within G10. The initial fencing, to be adjusted following completion of these works is illustrated with a dotted purple line at Appendix 5.
- 4.1.7 For low value and adjacent trees and tree groups on the northern and southern boundaries, 'Herras' type fencing of welded mesh panels on rubber or concrete feet is deemed adequate for preventing access during development while allowing for sufficient space to carry out any required works safely.
- 4.1.8 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 unless specified in this method statement. The site manager must ensure that all personnel are aware of the restrictions that apply to the fenced-off area.
- 4.1.9 Once the fencing is erected, waterproof warning signs labelled 'Tree Protection Area' should be placed at 3m intervals to ensure that all personnel are aware of the restrictions that apply to the fenced-off area (see Appendix 1 for an example sign).
- 4.1.10 The protective fencing should be inspected for faults or damage by the

site manager or other responsible named person on a regular basis and a written record kept. Any faults or defects should be repaired or replaced as soon as is reasonably practicable. The Tree Protection Fencing shall not be removed, breached or altered without prior written authorisation from the local planning authority and under arboricultural supervision by a suitable named responsible individual appointed by the site manager.

4.2 Retaining Walls and Ground Level Changes

- 4.2.1 The new development requires the construction of retaining walls and an associated increase in ground levels, some of which encroach within the RPA of G2, T3, T4, T6, T7, G8, G14, T25, T26 and T27. Retaining wall excavation works should be carried out under Arboricultural supervision when working within the RPA of retained trees.
- 4.2.2 This encroachment into the trees RPA should not significantly adversely impact on the health or future condition of the trees, provided care is taken during the construction and avoiding damage to significant roots where possible.
- 4.2.3 Care must be taken to prevent contamination with chemical spillages, including petrol, diesel and oils. Cement mixers and any other toxic materials should not be permitted within the RPA of the trees.

4.3 Drainage and Utilities

- 4.3.1 Drainage and utilities are to be directed away from retained trees. Over-ground services should ideally be routed away from areas where they are likely to interfere with the crowns of mature trees. New underground services should be grouped together and routed away from RPAs. NJUG 10: Guidelines for the Planning, Installation and Maintenance of Utility Services in Proximity to Trees should be considered when installing services.

4.4 Additional Precautions

- 4.4.1 Allowance should be made for operations outside of the CEZ that could indirectly impact on trees. Including space for site huts, temporary toilet facilities (including their drainage) and other temporary structures; and space for storing (whether temporary or

long-term) materials.

- 4.4.2 Care must be taken to prevent contamination with chemical spillages, including petrol, diesel and oils. Cement mixers and any other toxic materials should not be permitted within the RPA of the trees. Any materials whose accidental spillage would cause damage to a tree should be stored and handled well away from the outer edge of its RPA.
- 4.4.3 Fires on the site should be avoided if possible. Where they are unavoidable, and approved by the Local environmental health authority, they should not be lit in a position where heat could affect foliage or branches. The potential size of a fire and the wind direction should be considered when determining its location, and it should be attended always until safe enough to leave.

4.5 Post Construction Landscaping

- 4.5.1 Many of the trees on site may be subject to some form of landscaping or seeding beneath their canopies after the development phase. At this stage the protective fencing will have been removed and properties may be occupied.
- 4.5.2 Landscaping works should be carried out in such a way as to avoid ground level changes or deep digging. Tractor mounted rotovation or other mechanised cultivation methods must not be used.
- 4.5.3 No heavy machinery should be brought into the vicinity of retained trees.
- 4.5.4 Herbicides should be appropriate for the purpose and should not be used in such a way as to damage any retained trees or vegetation.

5. Signature

I trust this report provides all the required information.

Signed

Redacted

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Adam Winson

Chartered Arboriculturist, MSc, BSc (Hons), MICFor, AIEEM.

23rd November 2021

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Appendix 1: Images and Figures

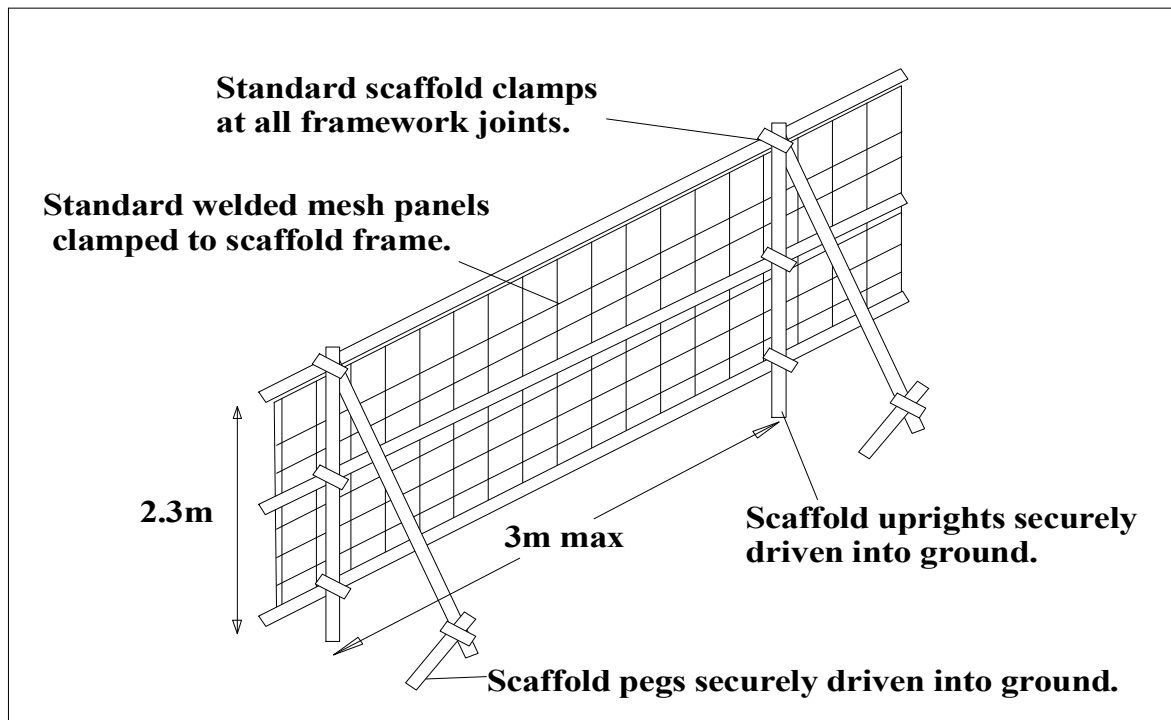


Figure 1: Fencing to BS 5837:2012



Figure 2: Photo of Fencing to BS 5837:2012

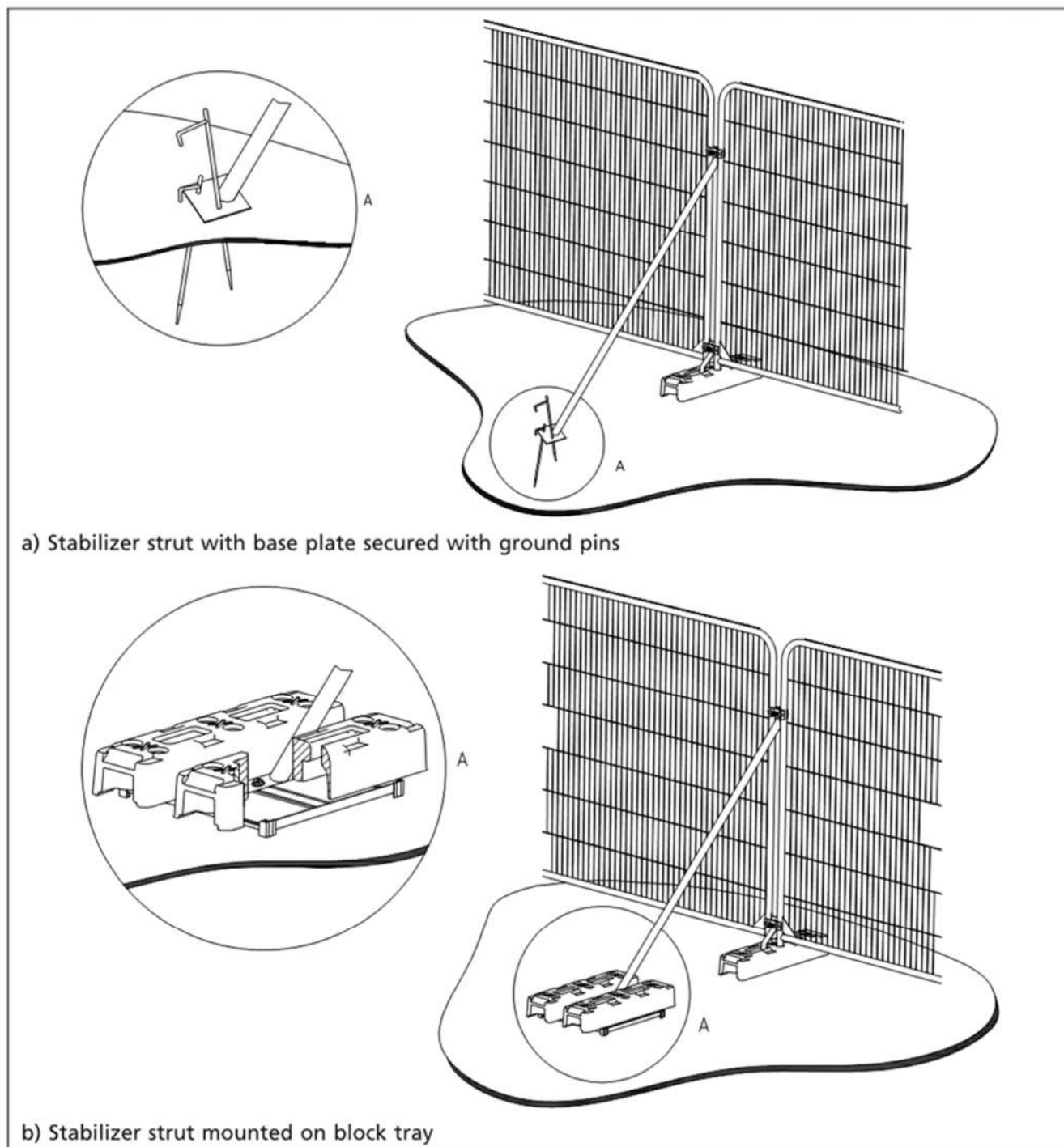


Figure 3: Secured 'Heras' type fencing with stabilizing system and fixed central pins (©BSI)



Figure 4: Secured 'Heras' type fencing with stabilizing system and anti-tamper couplers



Figure 5: Anti-tamper couplers to secure fencing and avoid unauthorised access



Figure 6: Warning sign for fencing



Figure 7: Example of A3 Correx Tree Protection Warning Sign fixed to fencing panel

Appendix 2: Relevant Contact Details

Contact Name	Organisation/ Details	Contact Number	Contact E-mail
Katie Milnes	Strata Homes Limited	01302 308 579	Redacted
Adam Winson	AWA Tree Consultants Ltd Arboricultural Consultant	0114 272 1124	Redacted
Joe Robertson	Kirklees Council Tree Officer	01484 414 909	dc.admin@kirklees.gov.uk

Appendix 3: Record of Arboricultural Supervision

Required Site Visits	
Name of Site Inspector/ Arboricultural Consultant	
Supervision Stages	Comments/ Required Actions
Site visit 1: Inspect the tree protective fencing prior to any development works. Confirm tree protection completed to the standard specified in this method statement.	Signed and Dated
Site visit 2: Supervision of contractors during construction of retaining walls within RPA of retained trees.	Signed and Dated
Site visits - Monthly: Supervise any other sensitive operations, if required, as they arise in relation to trees.	Signed and Dated
Additional Comments/ Required Actions:	

Additional Comments/ Required Actions:

Signed and Dated

Tree ID	Tree Species		Maturity	Measurements				Crown (m)					Tree Condition							Value		Management
	Common Name	Latin Name		Height (m)	Stems	Stem Diameter (mm)	Estimated	Ave Height	N	E	S	W	Roots	Stem	Crown	Comments	Physiological	Structural	Life Expectancy	Amenity	Category	Works
T1	Ash	<i>Fraxinus excelsior</i>	Semi-mature	12	2	370 560	No	1.5	6	6	6.5	6	No visual defects	Multiple stemmed at base. Vertical. Epicormic growths. Old pruning wounds. Stubs	Old pruning wounds. Minor dieback. Minor deadwood. Snapped /hanging branches	Public footpath running to west	Fair	Fair	10 to 20 yrs	Moderate	C	Removal required to facilitate development
G2	Cypress Laurel	<i>Cupressus sp.</i> <i>Prunus sp.</i>	Semi-mature	7	10+	110 avg	Yes	0	See Plan				Adjacent Cypress hedge, managed. Provides good degree of screening. Transitions to Laurel hedging at eastern end				Fair	Fair	20 to 40 yrs	Low	C	Lift southern canopy to 1m in order to facilitate retaining wall
T3	Sycamore	<i>Acer pseudoplatanus</i>	Semi-mature	9	2	120 140	Yes	4	5	5	5	5	Limited access around base. No visual defects	Multiple stemmed at base. Vertical. Stubs. Old pruning wounds	Normal. Minor deadwood. Snapped /hanging branches. Overhanging into the site	Adjacent tree, access prevented detailed inspection and accurate stem measurement	Fair	Fair	>40 yrs	Low	C	No works required
T4	Goat Willow	<i>Salix caprea</i>	Early-mature	9	1	210	Yes	0.5	4	4	4	4	No visual defects. Limited access around base	Single stemmed. Vertical. Old pruning wounds. Stubs. Epicormic growths. Tight union	Normal. Old pruning wounds. Minor deadwood. Snapped /hanging branches. Overhanging into the site	Adjacent tree, access prevented detailed inspection and accurate stem measurement	Fair	Fair	20 to 40 yrs	Low	C	Lift crown to 1m in order to facilitate retaining wall
T5	Goat Willow	<i>Salix caprea</i>	Early-mature	5	1	200	Yes	1	1	1	1	1	No visual defects. Limited access around base	Single stemmed. Vertical. Epicormic growths. Old pruning wounds. Stubs	Old pruning wounds. Minor deadwood. 50% dead / absent. Snapped /hanging branches	Adjacent tree, access prevented detailed inspection and accurate stem measurement. Topped. Poor pruning works limit long-term value	Poor	Fair	20 to 40 yrs	Low	C	No works required

Tree ID	Tree Species		Maturity	Measurements				Crown (m)					Tree Condition							Value		Management
	Common Name	Latin Name		Height (m)	Stems	Stem Diameter (mm)	Estimated	Ave Height	N	E	S	W	Roots	Stem	Crown	Comments	Physiological	Structural	Life Expectancy	Amenity	Category	Works
T6	Whitebeam	<i>Sorbus aria</i>	Semi-mature	7.5	1	210	Yes	1.5	3	3	3	3	No visual defects. Limited access around base	Single stemmed. Vertical. Old pruning wounds. Stubs	Normal. Old pruning wounds. Minor deadwood. Snapped /hanging branches. Overhanging into the site	Adjacent tree, access prevented detailed inspection and accurate stem measurement	Fair	Fair	20 to 40 yrs	Low	C	Reduce southern crown by 1m in order to facilitate development, pruning to suitable growth points
T7	Whitebeam	<i>Sorbus aria</i>	Semi-mature	7	1	210	Yes	1	3.5	3	3.5	3.5	No visual defects. Limited access around base	Single stemmed. Vertical. Old pruning wounds. Stubs	Normal. Old pruning wounds. Minor deadwood. Snapped /hanging branches. Overhanging into the site	Adjacent tree, access prevented detailed inspection and accurate stem measurement	Fair	Fair	20 to 40 yrs	Low	C	Reduce southern crown by 1m in order to facilitate development, pruning to suitable growth points
G8	Cherry Spruce Sycamore Willow Cypress	<i>Prunus sp.</i> <i>Picea sp.</i> <i>Acer sp.</i> <i>Salix sp.</i> <i>Cupressus sp.</i>	Semi-mature	10	10+	130 avg	Yes	0.5	See Plan				Adjacent boundary trees and hedging, access prevented detailed inspection and accurate stem measurement. Managed				Fair	Fair	>40 yrs	Low	C	Reduce tree crowns and hedges to site boundary, pruning to suitable growth points
G9	Hawthorn Elder	<i>Crataegus sp.</i> <i>Sambucus sp.</i>	Semi-mature	5.5	10+	80 avg	Yes	0	See Plan				Adjacent hedging, access prevented detailed inspection and accurate stem measurement. Overgrown from adjacent garden. Provides good screening				Fair	Fair	>40 yrs	Low	C	Reduce southern aspect by 1m
G10	Oak Cherry Holly Hawthorn Rowan Elder	<i>Quercus sp.</i> <i>Prunus sp.</i> <i>Ilex sp.</i> <i>Crataegus sp.</i> <i>Sorbus sp.</i> <i>Sambucus sp.</i>	Semi-mature	17	10	230	Yes	7	See Plan				Bankside group with small beck at the eastern aspect. Steep banking and bramble understorey prevented detailed inspection and accurate stem measurements. Some boundary trees overhang new building to west. Provides good screening				Good	Good	>40 yrs	Moderate	C	No works required

Tree ID	Tree Species		Maturity	Measurements				Crown (m)				Tree Condition								Value		Management
	Common Name	Latin Name		Height (m)	Stems	Stem Diameter (mm)	Estimated	Ave Height	N	E	S	W	Roots	Stem	Crown	Comments	Physiological	Structural	Life Expectancy	Amenity	Category	Works
G11	Hawthorn Oak	<i>Crataegus sp.</i> <i>Quercus sp.</i>	Semi-mature	11	10+	150 avg	Yes	0	See Plan				Access prevented detailed inspection and accurate stem measurements. Eastern aspect consisting of Hawthorn, western aspect consisting of young Oak. Southern aspect trimmed away from overhead electricity wires				Fair	Fair	>40 yrs	Low	C	No works required
T12	Ash	<i>Fraxinus excelsior</i>	Semi-mature	12	1	280	Yes	4	2.5	3	3.5	2.5	Limited access around base. No visual defects	Single stemmed. Vertical. Stubs	Normal. Old pruning wounds. Minor dieback. Minor deadwood. Snapped /hanging branches	Access prevented detailed inspection. Elder understorey. Signs of Ash Dieback	Fair	Fair	10 to 20 yrs	Low	C	No works required
T13	Oak	<i>Quercus robur</i>	Mature	20	1	820	Yes	3.5	8	6.5	8	7.5	No visual defects	Single stemmed. Vertical. Stubs. Old pruning wounds. Epicormic growths. Minor cavities	Normal. Old pruning wounds. Minor deadwood. Snapped /hanging branches	Large hanging branch in northern crown at 8m. Hawthorn and Holly understorey. Small treehouse at 4m	Fair	Fair	>40 yrs	Moderate	B	Removal required to facilitate development. Could be reduced to 4m habitat pole
G14	Oak	<i>Quercus robur</i>	Early-mature	19	10+	450 avg	No	6	See Plan				Adjacent group of early-mature to mature Oak, east of a small beck. Grassy understorey with occasional Rowan and Holly. Good long-term potential				Good	Good	>40 yrs	Moderate	A	No works required
T15	Hawthorn	<i>Crataegus monogyna</i>	Mature	7	1	300	Yes	0.5	4	4	4	4	No visual defects. Limited access around base	Single stemmed. Vertical. Multiple stemmed. at 2m. Epicormic growths. Old pruning wounds. Stubs. Tight union	Normal. Old pruning wounds. Minor deadwood. Snapped /hanging branches. Rubbing branches	Dense crown. Terrain and understorey prevented detailed inspection and accurate stem measurement. Elder growing within crown	Fair	Good	>40 yrs	Moderate	C	Removal required to facilitate development

Tree ID	Tree Species		Maturity	Measurements				Crown (m)					Tree Condition							Value		Management
	Common Name	Latin Name		Height (m)	Stems	Stem Diameter (mm)	Estimated	Ave Height	N	E	S	W	Roots	Stem	Crown	Comments	Physiological	Structural	Life Expectancy	Amenity	Category	Works
T16	Oak	<i>Quercus robur</i>	Mature	16	1	560	No	2	6	2.5	5	6.5	No visual defects	Single stemmed. Vertical. Stubs. Epicormic growths	Old pruning wounds. Minor deadwood. Snapped /hanging branches. Slightly unbalanced to west		Fair	Fair	>40 yrs	Moderate	B	No works required
T17	Oak	<i>Quercus robur</i>	Mature	16	1	630	No	0.5	4	3	4	5	No visual defects	Single stemmed. Vertical. Epicormic growths. Stubs. Minor cavities	Cavities. Minor deadwood. Snapped /hanging branches. Slightly unbalanced to west	Top lost in past with lateral branches taking over apical dominance	Fair	Fair	>40 yrs	Moderate	C	No works required
T18	Oak	<i>Quercus robur</i>	Semi-mature	9	1	330	No	0.5	3.5	2	3.5	5	No visual defects	Single stemmed. Vertical. Stubs. Bark damage. Minor cavity	Old pruning wounds. Minor deadwood. Snapped /hanging branches. Slightly unbalanced to west	Top lost in past. Suppressed by G14	Fair	Fair	>40 yrs	Moderate	C	No works required
T19	Oak	<i>Quercus robur</i>	Mature	23	1	950	No	3	3	9	14.5	13	Waterlogged	Single stemmed. Significant lean to south. Epicormic growths. Old pruning wounds. Stubs. Tears. Bark damage. Minor cavities. Decay fungi	Old pruning wounds. Cavities. Major deadwood. Snapped /hanging branches. Unbalanced to south	Large section of southern crown failed in past. Fungi at base between northern buttress roots, likely <i>Gymnopus</i> sp.	Fair	Fair	20 to 40 yrs	Moderate	B	Removal required to facilitate development. Could be reduced to 4 - 6m habitat pole

	Tree Species			Measurements				Crown (m)				Tree Condition							Value		Management	
Tree ID	Common Name	Latin Name	Maturity	Height (m)	Stems	Stem Diameter (mm)	Estimated	Ave Height	N	E	S	W	Roots	Stem	Crown	Comments	Physiological	Structural	Life Expectancy	Amenity	Category	Works
T20	Hawthorn	Crataegus monogyna	Semi-mature	7	2	200 220	Yes	0	3	1	3	3	Waterlogged. Exposed roots	Twin stemmed at base. Vertical. Epicormic growths. Old pruning wounds. Stubs. Tight union	25% absent. Small / sparse. Moderate dieback. Minor deadwood. Snapped /hanging branches. Slightly unbalanced to west	Stagnant pond to east. Dead top and suppressed by tree within G14. Limited long-term value	Poor	Fair	<10 yrs	Low	C	Removal required to facilitate development
T21	Sycamore	Acer pseudoplatanus	Semi-mature	10	4	210 280 250 180	Yes	0	4	3.5	4	4	No visual defects. Limited access around base	Multiple stemmed at base. Vertical. Epicormic growths. Old pruning wounds. Stubs. Tight union. Partially included bark	Old pruning wounds. Minor deadwood. Snapped /hanging branches	Terrain prevented detailed inspection and accurate stem measurement Bramble understorey. Old ivy within crown and stagnant pond to north-east	Fair	Fair	>40 yrs	Low	C	Removal required to facilitate development
T22	Sycamore	Acer pseudoplatanus	Young	7	1	180	Yes	0.5	2.5	1.5	2.5	2.5	No visual defects. Limited access around base	Single stemmed. Vertical. Epicormic growths. Old pruning wounds. Stubs	Old pruning wounds. Cavities. Minor deadwood. Snapped /hanging branches	Suppressed by G14. Growing close to T23. Limited long-term value	Fair	Fair	20 to 40 yrs	Low	C	Removal required to facilitate development
T23	Hawthorn	Crataegus monogyna	Semi-mature	6.5	3	110 100 100	Yes	0.5	3	3	3.5	3.5	No visual defects. Limited access around base	Single stemmed at base, multiple stemmed at 0.5m. Vertical. Epicormic growths. Old pruning wounds.	Minor deadwood. Snapped /hanging branches	Close to T22	Fair	Fair	>40 yrs	Low	C	Removal required to facilitate development

	Tree Species			Measurements				Crown (m)					Tree Condition								Value		Management
Tree ID	Common Name	Latin Name	Maturity	Height (m)	Stems	Stem Diameter (mm)	Estimated	Ave Height	N	E	S	W	Roots	Stem	Crown	Comments	Physiological	Structural	Life Expectancy	Amenity	Category	Works	
G24	Sycamore Elder Holly	Acer sp. Sambucus sp. Ilex sp.	Semi-mature	7	8	150 avg	Yes	0.5	See Plan				Unmanaged field boundary group with Bramble understorey. Limited long-term value				Fair	Fair	20 to 40 yrs	Low	C	Reduce western aspect by 1m to facilitate development, pruning to suitable growth points	
T25	Horse Chestnut	Aesculus hippocastanum	Semi-mature	9	2	330 340	No	0.5	5	3	5	5	No visual defects	Twin stemmed at 1m. Slight lean to east. Epicormic growths. Old pruning wounds. Stubs. Tight union. Partially included bark	Insect / caterpillar attack. Minor deadwood. Snapped /hanging branches	Signs of Chestnut Leaf miner.Tight union at 1m	Fair	Fair	20 to 40 yrs	Moderate	C	Lift western crown to 2m to facilitate retaining wall, pruning to suitable growth points	
T26	Sycamore	Acer pseudoplatanus	Semi-mature	9	1	230	Yes	3.5	3.5	3.5	4.5	3.5	No visual defects. Limited access around base	Single stemmed. Vertical. Epicormic growths. Old pruning wounds. Stubs	Old pruning wounds. Cavities. Minor deadwood. Snapped /hanging branches	Adjacent tree, access prevented detailed inspection and accurate stem measurement. Small Hawthorn and Field Maple in understorey	Fair	Fair	>40 yrs	Low	C	No works required	
T27	Sycamore	Acer pseudoplatanus	Semi-mature	9	2	220 250	Yes	3.5	4	4.5	4	4	No visual defects. Limited access around base	Twin stemmed at base. Slight lean to east. Epicormic growths. Old pruning wounds. Stubs	Cavities. Minor deadwood. Snapped /hanging branches. Slightly unbalanced to east	Adjacent tree, access prevented detailed inspection and accurate stem measurement. Dead Hawthorn in understorey	Fair	Fair	>40 yrs	Low	C	No works required	

Tree ID	Tree Species		Maturity	Measurements				Crown (m)					Tree Condition							Value		Management
	Common Name	Latin Name		Height (m)	Stems	Stem Diameter (mm)	Estimated	Ave Height	N	E	S	W	Roots	Stem	Crown	Comments	Physiological	Structural	Life Expectancy	Amenity	Category	Works
T28	Oak	<i>Quercus robur</i>	Young	5	2	90 60	No	1	2	2.5	3	3	No visual defects	Twin stemmed at base. Vertical. Epicormic growths. Stubs	Minor deadwood. Snapped /hanging branches	Growing against small stone wall	Fair	Fair	>40 yrs	Low	C	Removal required to facilitate development
T29	Ash	<i>Fraxinus excelsior</i>	Semi-mature	15	3	320 230 320	No	4	6	6.5	5	6	No visual defects	Multiple stemmed at base. Vertical. Epicormic growths. Old pruning wounds. Stubs. Tight union. Cup-like union collecting dirt/water. Bark damage	Cavities. Old pruning wounds. Minor deadwood. Snapped /hanging branches. Overhanging adjacent land	Overhangs road to south	Fair	Fair	10 to 20 yrs	Low	C	Removal required to facilitate development
T30	Sycamore	<i>Acer pseudoplatanus</i>	Semi-mature	8	1	240	No	3	3	3	3	3	No visual defects. Limited access around base	Single stemmed. Vertical. Epicormic growths. Old pruning wounds. Stubs	Old pruning wounds. Minor deadwood. Snapped /hanging branches. Overhanging adjacent land	Pruned away from footpath to south	Fair	Fair	>40 yrs	Low	C	Removal required to facilitate development
G31	Ash Sycamore Hawthorn	<i>Fraxinus sp.</i> <i>Acer sp.</i> <i>Crataegus sp.</i>	Semi-mature	9	10+	180 avg	Yes	1.5	See Plan				Small group consisting of Ash, Sycamore saplings and Hawthorn. Growing close to wall to the south. Southern canopy pruned away from footpath				Fair	Fair	20 to 40 yrs	Low	C	Removal required to facilitate development

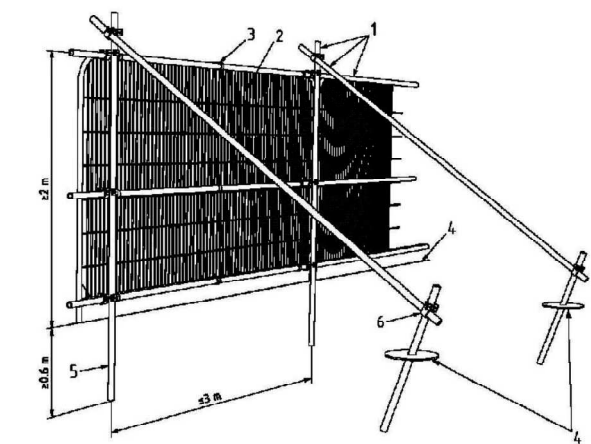
	Tree Species			Measurements				Crown (m)				Tree Condition							Value		Management	
Tree ID	Common Name	Latin Name	Maturity	Height (m)	Stems	Stem Diameter (mm)	Estimated	Ave Height	N	E	S	W	Roots	Stem	Crown	Comments	Physiological	Structural	Life Expectancy	Amenity	Category	Works
T32	Sycamore	Acer pseudoplatanus	Semi-mature	8	1	200	Yes	2	0.5	3	3	0.5	No visual defects. Limited access around base	Single stemmed. Vertical. Epicormic growths. Stubs. Old pruning wounds	Old pruning wounds. Cavities. Minor deadwood. Snapped /hanging branches. Slightly unbalanced to east. Overhanging adjacent land	Suppressed by T33	Fair	Fair	>40 yrs	Low	C	Removal required to facilitate development
T33	Ash	Fraxinus excelsior	Semi-mature	10	1	250	Yes	2	3.5	4	3	3	Limited access around base. No visual defects	Single stemmed. Vertical. Epicormic growths. Old pruning wounds. Stubs	Old pruning wounds. Cavities. Minor dieback. Minor deadwood. Snapped /hanging branches. Overhanging adjacent land	Overhangs road to south	Fair	Fair	10 to 20 yrs	Low	C	Removal required to facilitate development
G34	Ash	Fraxinus excelsior	Semi-mature	11	3	230 300 300	No	3	6	6	4	6	No visual defects. Limited access around base	Multiple stemmed at base. Vertical. Epicormic growths. Old pruning wounds. Stubs	Old pruning wounds. Cavities. Minor deadwood. Snapped /hanging branches	Symptoms of Ash Dieback limits long-term prospects	Fair	Fair	10 to 20 yrs	Low	C	Removal required to facilitate development
T35	Hawthorn	Crataegus monogyna	Semi-mature	6	3	100 60 90	Yes	3	3	3	3	3	Limited access around base	Multiple stemmed at base. Vertical. Epicormic growths. Old pruning wounds. Stubs. Tight union	Old pruning wounds. Cavities. Minor deadwood. Snapped /hanging branches	Understorey of long grass and nettles. Access prevented detailed inspection and accurate stem measurement	Fair	Fair	>40 yrs	Low	C	Removal required to facilitate development

Tree ID	Tree Species		Maturity	Measurements				Crown (m)					Tree Condition							Value		Management
	Common Name	Latin Name		Height (m)	Stems	Stem Diameter (mm)	Estimated	Ave Height	N	E	S	W	Roots	Stem	Crown	Comments	Physiological	Structural	Life Expectancy	Amenity	Category	Works
T37	Cypress	<i>Cuprocyparis sp.</i>	Semi-mature	9	1	340	Yes	0	3.5	4.5	4.5	5	No visual defects. Limited access around base	Single stemmed. Vertical. Epicormic growths. Old pruning wounds. Stubs	Old pruning wounds. Cavities. Minor deadwood. Snapped /hanging branches	Adjacent tree, access prevented detailed inspection and accurate stem measurement. Ground level higher within garden	Fair	Fair	>40 yrs	Moderate	C	No works required
T36	Varigated Maple	<i>Acer sp.</i>	Semi-mature	7.5	1	320	Yes	3.5	3	3	3	3	No visual defects. Limited access around base	Single stemmed. Vertical. Epicormic growths. Old pruning wounds. Stubs	Old pruning wounds. Cavities. Minor deadwood. Snapped /hanging branches	Adjacent tree, access prevented detailed inspection and accurate stem measurement. Ground level higher within garden	Fair	Fair	>40 yrs	Low	C	No works required
T38	Ash	<i>Fraxinus excelsior</i>	Semi-mature	10	1	270	Yes	4	3	2.5	3	2.5	No visual defects. Limited access around base	Single stemmed. Vertical. Epicormic growths. Old pruning wounds. Stubs	Old pruning wounds. Cavities. Minor deadwood. Snapped /hanging branches	Adjacent tree, access prevented detailed inspection and accurate stem measurement	Fair	Fair	10 to 20 yrs	Low	C	No works required
T39	Ash	<i>Fraxinus excelsior</i>	Semi-mature	11	1	300	Yes	3	2.5	2.5	3	3	No visual defects. Limited access around base	Single stemmed. Vertical. Epicormic growths. Old pruning wounds. Stubs	Old pruning wounds. Cavities. Minor deadwood. Snapped /hanging branches	Adjacent tree, access prevented detailed inspection and accurate stem measurement	Fair	Fair	10 to 20 yrs	Low	C	No works required
T40	Grey Willow	<i>Salix cinerea</i>	Semi-mature	6.5	6	100 avg	Yes	3	2	2	2.5	1.5	No visual defects. Limited access around base	Single stemmed. Vertical. Epicormic growths. Old pruning wounds. Stubs	Old pruning wounds. Cavities. Minor deadwood. Snapped /hanging branches	Adjacent tree, access prevented detailed inspection and accurate stem measurement	Fair	Fair	10 to 20 yrs	Low	C	No works required

	Tree Species			Measurements				Crown (m)				Tree Condition							Value		Management	
Tree ID	Common Name	Latin Name	Maturity	Height (m)	Stems	Stem Diameter (mm)	Estimated	Ave Height	N	E	S	W	Roots	Stem	Crown	Comments	Physiological	Structural	Life Expectancy	Amenity	Category	Works
G41	Privet	Ligustrum vulgare	Semi-mature	3	10+	70 avg	Yes	0	See Plan				Access prevented detailed inspection and accurate stem measurement. Provides good screening				Fair	Fair	10 to 20 yrs	Low	C	Remove 2m of hedging from the western aspect to facilitate development
T42	Crack Willow	Salix fragilis	Semi-mature	6	1	210	Yes	1	3	2	2.5	3	No visual defects	Single stemmed. Vertical. Epicormic growths. Old pruning wounds. Stubs	Old pruning wounds. Cavities. Minor deadwood. Snapped /hanging branches	Access prevented detailed inspection and accurate stem measurement	Fair	Fair	10 to 20 yrs	Low	C	Removal required to facilitate development
G43	Laurel	Prunus laurocerasus	Semi-mature	3	10+	90 avg	Yes	0	See Plan				Access prevented detailed inspection and accurate stem measurement. Provides effective screening				Fair	Fair	10 to 20 yrs	Low	C	Remove hedge to site boundary to facilitate development
T44	Ash	Fraxinus excelsior	Semi-mature	11	1	410	No	3.5	4.5	5	4	4.5	Soil compaction	Single stemmed. Vertical. Old pruning wounds. Stubs. Cup-like union collecting dirt/water	Old pruning wounds. Cavities. Minor dieback. Minor deadwood. Snapped /hanging branches	Laurel and Berberis understorey	Fair	Fair	10 to 20 yrs	Low	C	Removal required to facilitate development
T45	Sycamore	Acer pseudoplatanus	Young	6	2	90 80	No	1	1	1	1	1	No visual defects. Limited access around base	Twin stemmed at base. Vertical. Epicormic growths. Old pruning wounds. Stubs. Tight union	Old pruning wounds. Minor deadwood. Snapped /hanging branches. Overhanging into the site	Adjacent tree growing by wall, access prevented detailed inspection and accurate stem measurement	Fair	Fair	>40 yrs	Low	C	No works required

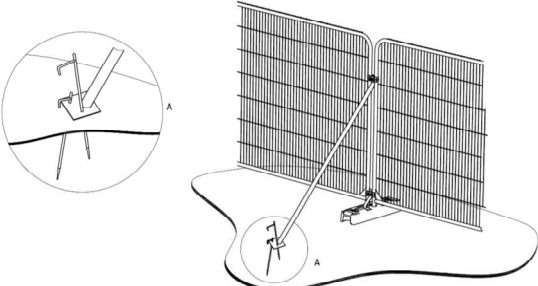
	Tree Species			Measurements				Crown (m)				Tree Condition								Value		Management
Tree ID	Common Name	Latin Name	Maturity	Height (m)	Stems	Stem Diameter (mm)	Estimated	Ave Height	N	E	S	W	Roots	Stem	Crown	Comments	Physiological	Structural	Life Expectancy	Amenity	Category	Works
T46	Sycamore	Acer pseudoplatanus	Semi-mature	7	2	310 410	No	2	4	3.5	4	4	Soil compaction	Twin stemmed at base. Vertical. Epicormic growths. Old pruning wounds. Stubs. Bark damage. Tight union. Partially included bark. Minor cavities. Minor decay	Small / sparse. Low vigour. Old pruning wounds. Minor dieback. Minor deadwood. Snapped /hanging branches. Overhanging adjacent land	Bacterial bleed at tight base union limits long-term potential	Poor	Poor	<10 yrs	Low	U	Removal recommended and required to facilitate development
T47	Sycamore	Acer pseudoplatanus	Semi-mature	7	2	210 180	No	1	2.5	3.5	3.5	2.5	No visual defects	Twin stemmed at base. Vertical. Epicormic growths. Old pruning wounds. Stubs. Tight union	Old pruning wounds. Minor deadwood. Slightly unbalanced to east. Snapped /hanging branches	Electricity pole and wires to north	Fair	Fair	>40 yrs	Low	C	Removal required to facilitate development
T48	Ash	Fraxinus excelsior	Young	7.5	3	170 150 130	No	2.5	3.5	3.5	3.5	3.5	Soil compaction	Single stemmed at base, multiple stemmed at 0.5m. Vertical. Epicormic growths. Old pruning wounds. Stubs. Tight union. Partially included bark	Low vigour. Old pruning wounds. Minor dieback. Minor deadwood. Snapped /hanging branches	Adjacent tree growing by wall, access prevented detailed inspection and accurate stem measurement	Poor	Fair	10 to 20 yrs	Low	C	No works required

Inset 1: bs5837 Tree Protection Fencing



- Key
- 1 Standard scaffold poles
 - 2 Heavy gauge 2 m tall galvanized tube and welded mesh infill panels
 - 3 Panels secured to uprights and cross-members with wire ties
 - 4 Ground level
 - 5 Uprights driven into the ground until secure (minimum depth 0.6 m)
 - 6 Standard scaffold clamps

Inset 2: 'Heras' Tree Protection Fencing



Stabilizer strut with base plate secured with ground pins



Inset 3: Tree Protection Fencing Sign



Appendix 5: TREE PROTECTION PLAN Land off Barnsley Road, Denby Dale, Huddersfield, HD8 8XA Ref: AWA4005	
BRITISH STANDARD 5837:2012 SCALE: 1:1000 PAPER: A3	
	TREES TO BE RETAINED
	TREES FOR REMOVAL
	RPA: ROOT PROTECTION AREA
	TREE STEM
	BS5837 TREE PROTECTION FENCING
	'HERAS' TREE PROTECTION FENCING