TREE CONSULTANTS

ARBORICULTURAL METHOD STATEMENT

to BS 5837:2012 at

108 Hawshaw Lane, Hoyland, Barnsley, South Yorkshire S74 9ES

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:
Garry Greetham Associates
Westwood House,
18 Carr Lane,
Tankersley,
Barnsley,
South Yorkshire
S75 3BE

Date: *October 2019*

Reference: *AWA2293*

Institute of Chartered Foresters
Registered Consultant

Office: 0114 272 1124 Mobile: 0776 631 0880 Email: info@awatrees.com Website: awatrees.com
Union Forge, 27 Mowbray Street, Sheffield, S3 8EN. AWA Tree Consultants Limited. Company No. 8520123. Registered in England & Wales.

Contents

1. Introduction

1.1 Instruction

1.1.1 We are instructed by Garry Greetham of Garry Greetham Associates to prepare an arboricultural method statement for the proposed development at:

- **108 Hawshaw Lane, Hoyland, Barnsley, South Yorkshire S74 9ES**

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 July 2018, detailed within Appendix 4 of this report.

1.3 Description of Development

1.3.1 It is proposed to build a new house with associated access. 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 pruning works

3 Install tree protective fencing and ground protection boards

4 Pre commencement meeting/ confirm fencing is as specified

5 Install 'no dig' hard surfacing

6 Construction of new development

7 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 pruning works shall be carried out 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 protection fencing and ground protection boards 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 fencing and boards until completed to the standard specified in this method statement.
4 Site Meeting	Following installation of tree protective measures, the LPA shall be invited to inspect the fencing, and discuss any other site operations that have implications for trees.	Meeting with a representative of the LPA and the site manager. Alternatively, contractor can confirm the fencing, and tree works are as specified by taking photographs of the tree protection measures.
5 Install 'no dig' hard surfacing	Undertake installation of 'no dig' hard surfacing for driveway as the first construction phase on site.	Installation of 'no-dig' hard surfaces within RPAs should be carried out under arboricultural supervision and a written record kept at Appendix 3. If necessary, liaise with the local authority and the site foreman to ensure any issues are adequately resolved.
6 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.
7 Site Finishing	Removal of tree protective measures must only be undertaken when all site traffic and machinery has left the site.	If acceptable to the LPA, the contractor can take photos of the site to give to the LPA to gain approval for the removal of protective fencing.

3. Tree Management

3.1 Tree Works

3.1.1 No trees require removal to facilitate the development.

3.1.2 The adjacent Willow T10 will require reduction works to its eastern crown to facilitate the development. It is likely the tree will readily tolerate these pruning works with little negative amenity impact.

3.1.3 All tree work should be carried out according to British Standard 3998:2010 Tree Work - Recommendations.

3.1.4 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 (as illustrated with a thick purple 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 disproportionate. 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.

4.1.5 The fencing should be joined together 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 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 with the CEZ unless specified within this method statement. The site manager must ensure that all personnel are aware of the restrictions that apply to the fenced-off area.

4.1.7 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).

4.1.8 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 Ground Protection

4.2.2 The development work is within the exposed RPA of retained trees T9 to T12. As such, ground protection will be required to avoid compaction of the soil which can arise from the single passage of a heavy vehicle, especially in wet conditions, so that tree root functions remain unimpaired.

4.2.3 Interlinked ground protection boards should be used. They should be located as shown on the Tree Protection Plan (TPP) at Appendix 5 (as illustrated with a light blue area).

4.2.4 The precise location of the boards may need to be slightly adjusted on site due to local site conditions, but is not expected to differ significantly from that shown on the TPP.

4.2.5 The new temporary ground protection should be capable of supporting any traffic entering or using the site without being distorted or causing compaction of underlying soil.

4.2.6 For pedestrian movements only, a single thickness of scaffold boards placed either on top of a driven scaffold frame, so as to form a suspended walkway, or on top of a compression-resistant layer (e.g. 100 mm depth of woodchip), laid onto a geotextile membrane.

4.2.7 For pedestrian-operated plant up to a gross weight of 2t, proprietary, inter-linked ground protection boards placed on top of a compression-resistant layer (e.g. 150 mm depth of woodchip), laid onto a geotextile membrane.

4.3 New Hard Surfaces

4.3.2 New hard surfacing, in the form of a new access drive is proposed within the RPA of the high value Sycamore T12.

4.3.3 The works within the RPAs should not adversely impact on the health or future condition of the trees provided a **no-dig** method of construction is utilised.

4.3.4 The installation of the no-dig hard surfacing should be done as the first construction phase on site so that the site can be accessed throughout the development without causing ground disturbance, soil compaction and damage to tree roots.

4.3.5 The installation of the no-dig hard surfaces, within the RPA of the retained trees must be done under arboricultural supervision and a written record kept at Appendix 3.

4.3.6 The design and construction of the hard surfaces needs to be sensitive to the requirements of tree roots, substantial enough to withstand the expected levels of traffic and practicable in terms of ease of fabrication.

4.3.7 The finished surface must be porous in order to allow air and water to reach the tree roots, whilst at the same time being able to withstand the load applied. Toxic substances which could leach into the ground must be avoided. Severance of roots and soil compaction should be avoided. Any minor excavations in these areas to remove the existing surface vegetation/turf layer must be done so using hand tools only and under arboricultural supervision.

4.3.8 We are not qualified to recommend any particular construction method in terms of durability or structural integrity and any proposed construction should be approved by a qualified structural engineer prior to implementation. Appropriate sub-base options for new hard surfacing include three-dimensional cellular confinement system, such as those provided by Geosynthetics Limited (http://www.geosyn.co.uk).

4.3.9 Following the installation of 'no-dig' sub base, the LPA shall be invited to inspect the work, prior to the application of the final wearing layer. Alternatively, if acceptable to the LPA, the project arboriculturist can confirm the works are as specified by taking photographs and a written record kept at Appendix 3.

4.4 New Boundary Fencing

4.4.2 New boundary fencing is proposed within the RPA of trees T10 and T14. The 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 to avoid root damage, including the use of posts and panels or pile and beam type footings as opposed to strip footings.

4.4.3 The foundations for the fences are to be built using posts and panels or mini-pile and beam type foundations so as to minimise any root damage to the retained trees. The rooting activity at the point where the piles are proposed should be investigated by hand excavation. Consultations should first be undertaken with a structural engineer to ensure that this method of construction is viable and to assess the minimum diameter piles that would suffice for the structure.

4.4.4 The machinery required to dig and install the mini-piles is to pass over the RPA of the retained trees. Before the mini-pile machinery is brought onto site an assessment must be made as to whether ground protection will be needed to distribute the machinery weight. The details of the mini-pile machinery should be made available the LPA prior to accessing the site. Significant tracked or wheeled machines will require ground protection (e.g. interlinking, non-slip road plates) over the RPA to access the area.

4.5 Drainage and Utilities

4.5.2 Drainage and utilities are to be directed away from the 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.

4.6 Additional Precautions

4.6.2 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.

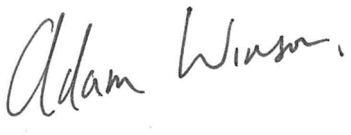
4.6.3 Care must be taken to prevent contamination with chemical spillages, including petrol, diesel and oils. Cement mixers and any other toxic materials should not be permitted within the RPA of the trees. Any materials whose accidental spillage would cause damage to a tree should be stored and handled well away from the outer edge of its RPA.

4.6.4 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.

5. Signature

I trust this report provides all the required information.

Signed



.....

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

24th October 2019

AWA Tree Consultants Limited
Union Forge
27 Mowbray Street
Sheffield
S3 8EN

www.awatrees.com

Appendix 1: Images and Figures

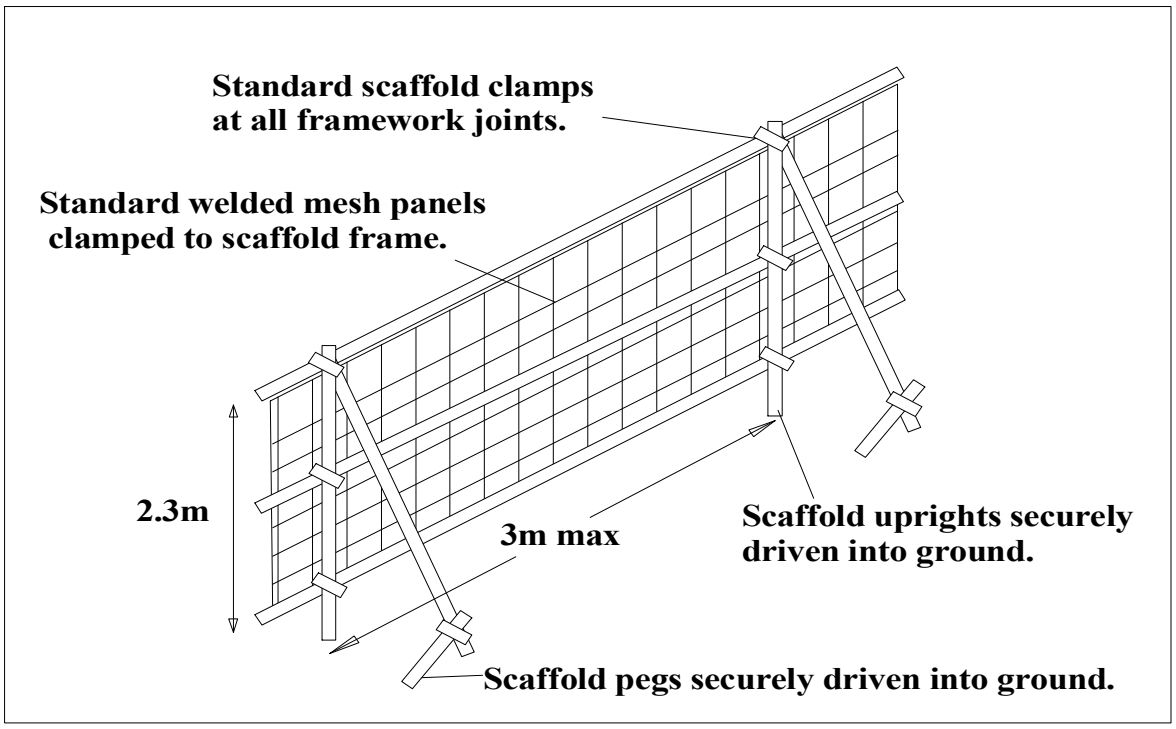


Figure 1: Fencing to BS 5837: 2012

Figure 2: Photo of Fencing to BS 5837: 2012

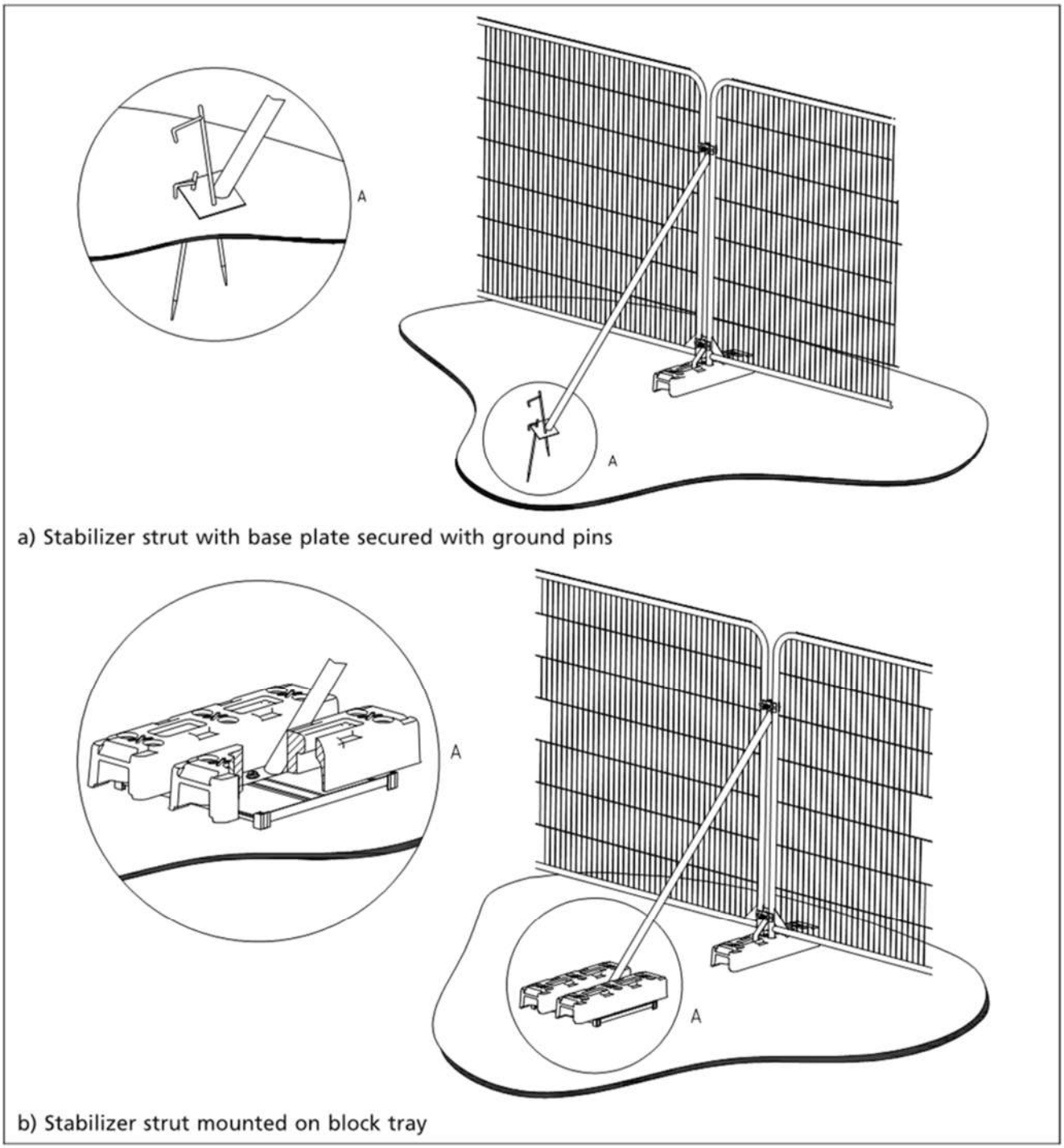


Figure 3: Secured 'Heras' type fencing with stabilizing system and fixed central pins (©BSI)

Figure 4: Example of warning sign for fencing

Figure 5: Secured 'Heras' type fencing with stabilizing system and anti-tamper couplers

Figure 6: Anti-tamper couplers to secure fencing and avoid unauthorised access

Appendix 2: Relevant Contact Details

Contact Name	Organisation/ Details	Contact Number	Contact E-mail
Garry Greetham	Garry Greetham Associates	01226 746 573	garry@garry.greethamassociates.co.uk
Adam Winson	AWA Tree Consultants Ltd. Arboricultural Consultant	0114 272 1124	adam@awatrees.com
Edward Jowett	Barnsley Metropolitan Borough Council Tree Officer	01226 772 557	edwardjowett@barnsley.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 installation of 'no dig' hard surfacing within RPA of high value Sycamore T12.	***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 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*	*Physiological*	*Structural*	*Life Expectancy*	*Amenity*	*Category*	*Works*
T1	Beech	*Fagus sylvatica*	Mature	18	1	1060	No	3	4.5	10	8	5	No visual defects	Single stemmed. Vertical. Bark damage. Minor cavities	Minor deadwood	Logs piled around base to north and east. Fence nailed to main stem.	Good	Good	>40 yrs	Moderate	**A**	No action required
T2	Beech	*Fagus sylvatica*	Mature	18	1	600	Yes	2	7	7	7	7	Limited access around base	Single stemmed. Vertical	Minor deadwood	Adjacent, no access.	Good	Good	>40 yrs	High	**B**	No action required
T3	Sycamore	*Acer pseudoplatanus*	Mature	18	1	550	Yes	5	5.5	5.5	5.5	5.5	Limited access around base	Single stemmed. Vertical. Epicormic growths. Old pruning wounds	Minor deadwood	Adjacent, no access.	Good	Good	>40 yrs	High	**B**	No action required
T4	Sycamore	*Acer pseudoplatanus*	Mature	18	1	700	Yes	6	5	5	5	5	Limited access around base	Single stemmed. Vertical. Ivy covered	Minor deadwood	Adjacent, no access.	Good	Good	>40 yrs	High	**B**	No action required
G5	Holly	*Ilex aquifolium*	Semi-mature	4	10+	60	No	0.5	See Plan				No visual defects	Single and Multiple stemmed. Vertical	Normal	Linear group of Holly bordering fenceline.	Good	Good	20 to 40 yrs	Low	**C**	No action required
T6	Pear	*Pyrus sp.*	Semi-mature	6	1	90	No	2	1	1	1	1	No visual defects	Single stemmed. Vertical	Normal	Stake embedded at base.	Good	Good	>40 yrs	Low	**C**	No action required

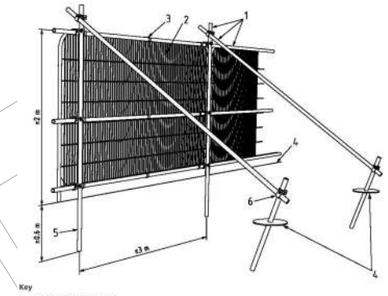
	Tree Species		Measurements					Crown (m)					Tree Condition							Value		Management
Tree ID	*Common Name*	*Latin Name*	*Maturity*	*Height (m)*	*Stems*	*Stem Dia (mm)*	*Estimated*	*Ave Height*	*N*	*E*	*S*	*W*	*Roots*	*Stem*	*Crown*	*Comments*	*Physiological*	*Structural*	*Life Expectancy*	*Amenity*	*Category*	*Works*
T7	Willow	*Salix sp.*	Semi-mature	5	10	30	No	1	2.5	2.5	2.5	2.5	No visual defects	Multiple stemmed at base. Vertical. Old pruning wounds. Stubs	Normal	Adjacent.	Good	Good	>40 yrs	Low	**C**	No action required
T8	Portuguese Laurel	*Prunus lusitanica*	Mature	6.5	1	330	No	1.5	4	3.5	3.5	3.5	No visual defects	Single stemmed. Vertical. Old pruning wounds. Bark damage	Old pruning wounds. Minor deadwood		Fair	Good	20 to 40 yrs	Moderate	**C**	No action required
T9	Willow	*Salix sp.*	Semi-mature	6.5	10	30	No	1	2.5	3	1	1	No visual defects	Multiple stemmed at base. Slight lean. Stubs	Minor deadwood	Adjacent. Leaning north west.	Fair	Fair	20 to 40 yrs	Low	**C**	No action required
T10	Willow	*Salix caprea*	Early-mature	10	7	150	No	1.5	3.5	3.5	4	5	No visual defects	Multiple stemmed at base. Vertical. Stubs	Minor deadwood	Adjacent.	Fair	Fair	20 to 40 yrs	Low	**C**	Reduce crown from east as required to facilitate development
T11	Willow	*Salix sp.*	Semi-mature	9	7	70	No	1	1.5	3	3	3.5	No visual defects	Multiple stemmed at base. Vertical. Stubs	Minor deadwood	Adjacent.	Fair	Fair	20 to 40 yrs	Low	**C**	No action required

	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*	*Physiological*	*Structural*	*Life Expectancy*	*Amenity*	*Category*	*Works*
T12	Sycamore	*Acer pseudoplatanus*	Mature	19	1	960	No	3	6	5	7	9	No visual defects	Twin stemmed at 2m. Vertical. Old pruning wounds. Minor cavities. Minor decay. Epicormic growths	Minor deadwood	Adjacent. Two co-dominant stems at 2m but union looks sound. Minor cavities with minor decay in old pruning wounds. Dense epicormic growth at base.	Good	Fair	>40 yrs	Moderate	**A**	No action required
T13	Sycamore	*Acer pseudoplatanus*	Early-mature	13	1	300	Yes	1	3	3	3	3	Limited access around base	Single stemmed. Vertical	Minor deadwood	Adjacent, no access.	Fair	Fair	>40 yrs	Moderate	**B**	No action required
T14	Beech	*Fagus sylvatica*	Mature	23	1	1260	No	2	14	11	6.5	10	No visual defects	Single stemmed. Vertical. Old pruning wounds. Minor cavities. Minor decay	Minor deadwood	Adjacent. Numerous moderate old pruning wounds with minor cavities and decay.	Fair	Fair	>40 yrs	High	**A**	No action required
T15	Cherry	*Prunus sp.*	Early-mature	9	1	270	No	1.5	3.5	3.5	3.5	4.5	No visual defects	Single stemmed. Vertical. Stubs	Minor deadwood	Adjacent.	Fair	Good	>40 yrs	Moderate	**C**	No action required

T2
T3
T1
G5
T4
T6
T15
T14
T13
T7
Existing hard standing
T8
T9
T10
T11
Existing hard standing
Access to development
Existing hard standing
T12
Adjacent Willow and Pine

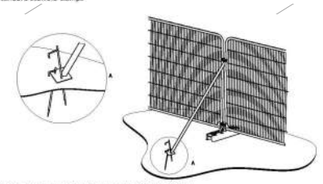
New hard surfacing to be installed using 'no dig' construction methods as the first construction phase on site. Installation to be done under arboricultural supervision.

Inset 1: Examples of Tree Protection Fencing

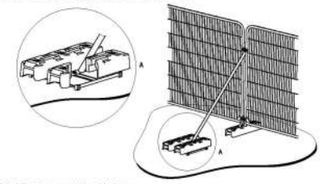


Key

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



a) Stabilizer strut with base plate secured with ground pins



b) Stabilizer strut mounted on block tray

NORTH

AWA TREE CONSULTANTS

Appendix 5:
Tree Protection Plan

108 Hawshaw Lane, Hoyland, Barnsley
Ref: AWA2293

BRITISH STANDARD 5837:2012

SCALE: 1:500 PAPER: A3

	TREES TO BE RETAINED
	TREES FOR REMOVAL
	SHRUBS TO BE RETAINED
	TREE STEM
	TREE STEM TO REMOVE
	TREE PROTECTION FENCING "SECURED HERAS"
	INTERLINKED GROUND PROTECTION BOARDS
	RPA: ROOT PROTECTION AREA