TREE CONSULTANTS

# ARBORICULTURAL METHOD STATEMENT

to BS 5837:2012 at

*Land at:*

***Roughbirchworth Lane***
***Oxspring***
***Penistone***
***S36 8YE***

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***

Date: *December 2020*

Reference: *AWA3548AMS*

Institute of Chartered Foresters
Registered Consultant

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# Contents

**1. INTRODUCTION ..... 3**

**2. METHOD STATEMENT TIMELINE ..... 4**

**3. TREE MANAGEMENT ..... 6**

**4. TREE PROTECTION ..... 6**

**5. SIGNATURE ..... 10**

**APPENDIX 1: IMAGES AND FIGURES ..... 11**

**APPENDIX 2: RELEVANT CONTACT DETAILS ..... 15**

**APPENDIX 3: RECORD OF ARBORICULTURAL SUPERVISION ..... 16**

**APPENDIX 4: TREE DATA ..... 18**

**APPENDIX 5: TREE PROTECTION PLAN ..... 19**

# 1. Introduction

## 1.1 Instruction

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

- **Roughbirchworth Lane, Oxspring, Penistone S36 8YE**

## 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 December 2020, 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.

1.3.2 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 removal and pruning 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 LPA shall be invited to inspect the fencing and tree works 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 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. | 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 measures. |

# 3. Tree Management

## 3.1 Tree Works

3.1.1 Pruning work is required to raise and reduce trees from proposed garden walls. Trees that may be affected by this include T26, T27, T31, T35, T36, T38, T39 and trees within group G34.

3.1.2 Pruning work should be limited to secondary branches and should not exceed 50mm in diameter where possible. The overall loss of branches must not exceed 10% of the overall live crown mass.

3.1.3 The development will require the removal of 8 trees: T3, T4, T5, T6, T7, T17, T19 and T42.

3.1.4 The trees requiring removal are highlighted in red on the plan at Appendix 5 and as detailed in the tree data schedule at Appendix 4.

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

3.1.6 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). Distances between distinct sections of fence and nearby trees are indicated with pink arrows and text.

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 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.

4.1.7 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 Construction of New Structures

4.2.1 New garden boundary treatments are proposed within the RPA of retained trees T14, T26, T27, T31, T33, T35, T36, T38 and T39.

4.2.2 The construction of garden boundary treatments will be completed following the removal of tree protection fencing, as they are proposed beyond the extents of the tree protection fences.

4.2.3 The encroachment into the tree's 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 post and beam type foundations so as to minimise any root damage to the retained trees. The rooting activity at the point where the posts are proposed should be investigated by hand excavation and adjusted accordingly if roots are encountered.

## 4.3 Drainage and Utilities

4.3.1 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.

4.3.2 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 the property 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



.....

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

**17th Decemeber**

**AWA Tree Consultants Limited**
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# Appendix 1: Images and Figures

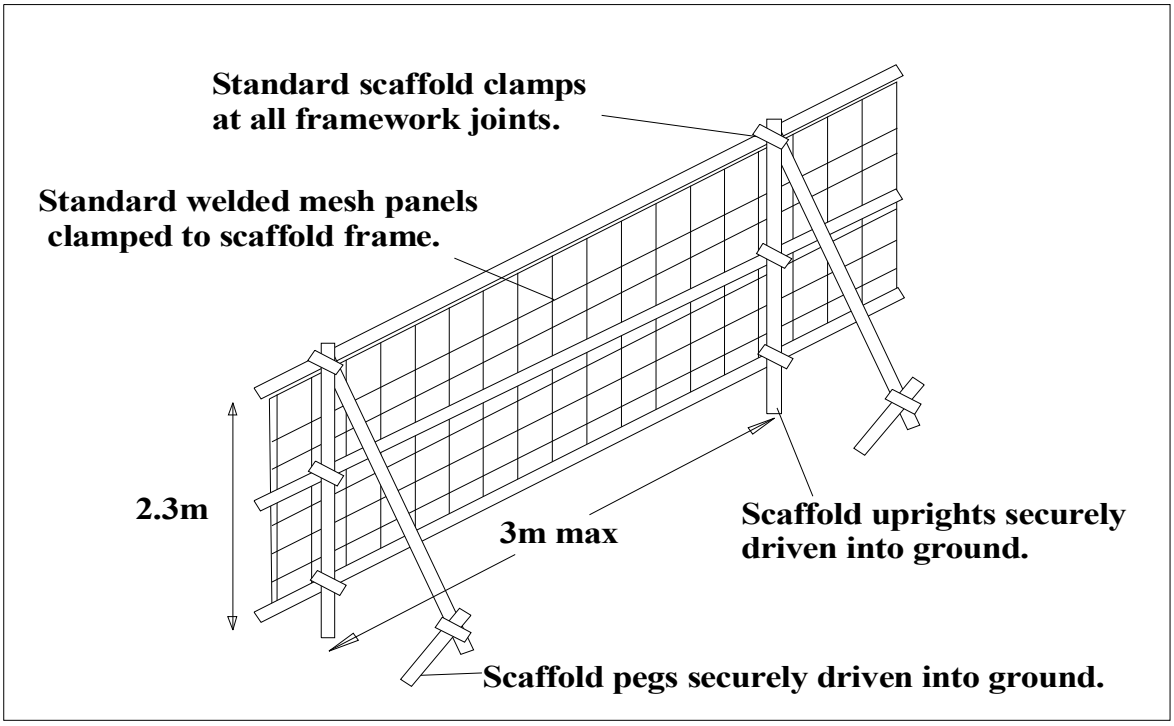



Figure 1: Fencing to BS 5837:2012



Figure 2: Photo of Fencing to BS 5837:2012

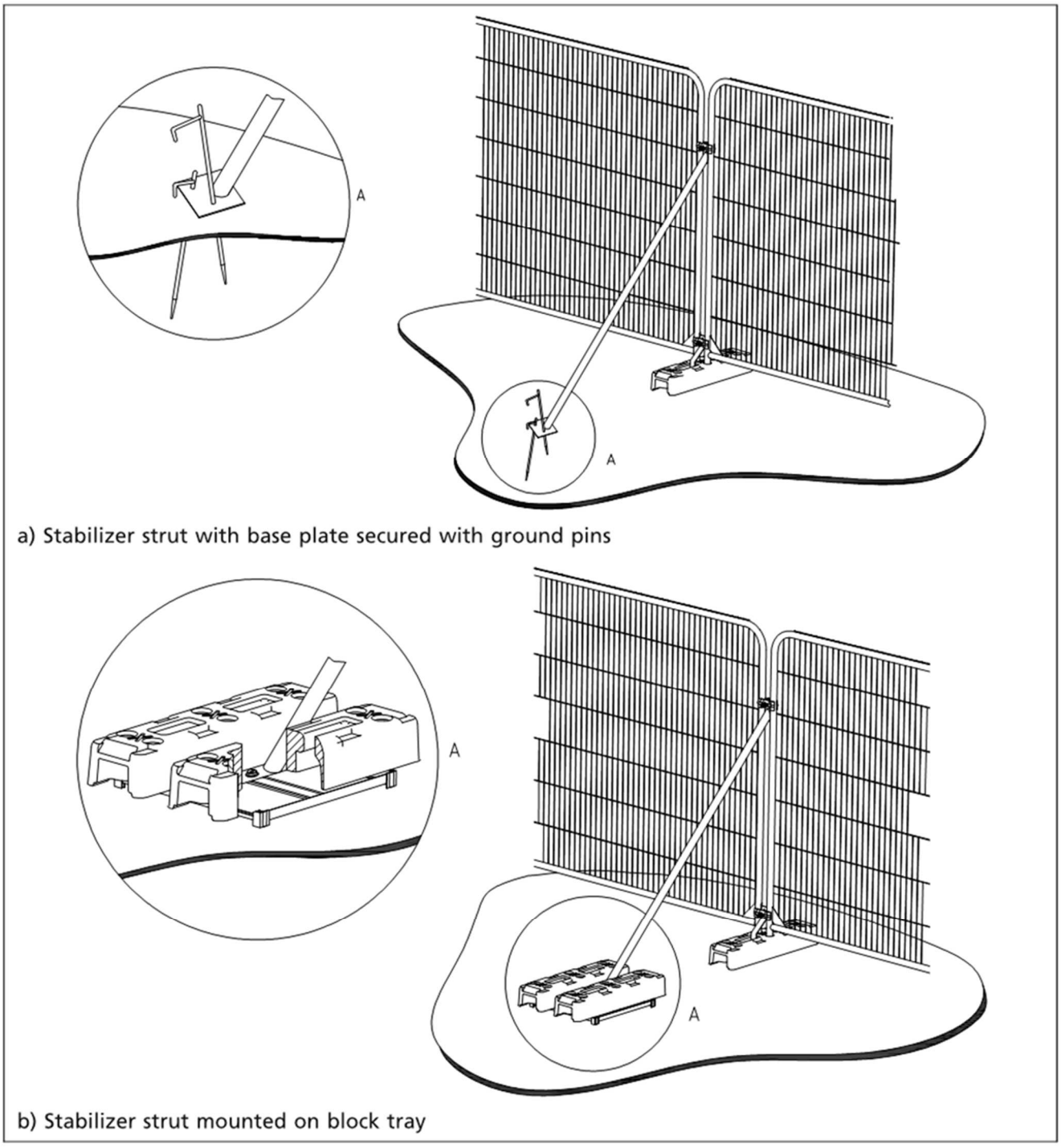



Figure 3: Secured 'Heras' type fencing with stabilizing system and fixed central pins (©BSI)



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 |
|---|---|---|---|
| Adam Winson | AWA Tree Consultants Ltd Arboricultural Consultant | 0114 272 1124 | adam@awatrees.com |
| Edward Jowett | Barnsley MBC Tree Officer | 01226 772557 | 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 visits:** 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 DATA**



| | 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* |
| T1 | Cherry | *Prunus avium* | Mature | 13 | 1 | 490 | No | 3 | 6 | 8.5 | 8 | 6 | No visual defects | Single stemmed, Slight lean south east, Old pruning wounds, Stubs, Tight union, Partially included bark, Minor decay, Multiple stemmed at 2m | Minor deadwood, Snapped /hanging branches, Vehicle damage | Decay in east scaffold limb. Lean corrected | Fair | Fair | 20 to 40 yrs | Moderate | **B** | No works required |
| T2 | Sycamore | *Acer pseudoplatanus* | Early-mature | 14 | 1 | 400 | No | 2 | 5.5 | 7.5 | 6.5 | 7 | Decay | Single stemmed, Vertical, Stubs, Old pruning wounds, Major cavity, Minor decay, Epicormic growths | Normal | Large epicormic at base removed, leaving large wounds with decay. Strong reaction wood | Good | Fair | >40 yrs | Moderate | **C** | No works required |
| T3 | Sycamore | *Acer pseudoplatanus* | Early-mature | 13 | 2 | 340, 330 | No | 2.5 | 5 | 4.5 | 4 | 4.5 | No visual defects | Single stemmed at base, Twin stemmed at 1m, Vertical, Pruning wounds - healing well, Epicormic growths, Tight union, Partially included bark, Cup-like union collecting dirt/water | Overhanging into the site | Situated in boundary wall | Good | Fair | 20 to 40 yrs | Moderate | **C** | Removal required to facilitate development |

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| | 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* |
| T4 | Sycamore | *Acer pseudoplatanus* | Early-mature | 13 | 2 | 420, 270 | No | 2 | 6 | 6.5 | 5.5 | 3.5 | No visual defects | Twin stemmed at base, Vertical, Stubs, Pruning wounds - healing well, Pruning wounds from crown lifting, Tight union, Partially included bark at 2m in north stem | Overhanging into the site, Minor deadwood | Situated just beyond boundary wall | Good | Fair | 20 to 40 yrs | Moderate | C | Removal required to facilitate development |
| T5 | Sycamore | *Acer pseudoplatanus* | Early-mature | 14 | 1 | 350 | No | 2 | 6 | 6.5 | 3.5 | 0.5 | No visual defects | Slight lean east into site, Single stemmed, Epicormic growths | Unbalanced, Overhanging into the site | Situated just beyond boundary wall | Fair | Fair | 20 to 40 yrs | Moderate | C | Removal required to facilitate development |
| T6 | Birch | *Betula pubescens* | Mature | 14 | 1 | 370 | No | 2.5 | 6 | 3.5 | 4.5 | 3 | Exposed roots | Single stemmed, Major cavity, Major decay, at base, Vertical, Stubs, Epicormic growths | Minor deadwood, Overhanging into the site | Large decay pocket on south east aspect of stem. Not suitable in developed context. | Fair | Poor | 10 to 20 yrs | Moderate | C | Removal required to facilitate development |
| T7 | Sycamore | *Acer pseudoplatanus* | Early-mature | 14 | 1 | 380 | No | 3 | 8 | 3.5 | 2 | 3 | No visual defects | Single stemmed, Slight lean north into site, Tight union at 3m | Unbalanced, Overhanging into the site | Situated just beyond boundary wall | Good | Fair | >40 yrs | Moderate | 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* |
| T8 | Sycamore | *Acer pseudoplatanus* | Mature | 21 | 2 | 360, 360 | Yes | 3 | 5.5 | 9 | 5.5 | 3 | Soil erosion, Exposed roots | Twin stemmed at base, Slight lean, Tight union, Partially included bark, Fused stems | | Situated bottom of banking. Stems crossing, almost fused up to 3m. | Good | Fair | 20 to 40 yrs | Moderate | **B** | No works required |
| T9 | Sycamore | *Acer pseudoplatanus* | Mature | 22 | 1 | 480 | No | 3 | 5.5 | 2.5 | 5 | 4.5 | Soil erosion, Exposed roots | Single stemmed, Vertical, Stubs | Normal, Minor deadwood | Situated on banking | Good | Good | >40 yrs | Moderate | **B** | No works required |
| T10 | Sycamore | *Acer pseudoplatanus* | Mature | 23 | 1 | 780 | No | 3 | 7.5 | 7.5 | 5 | 5 | Soil erosion, Exposed roots | Single stemmed at base, Twin stemmed at 2m, Multiple stemmed at 3m, Vertical | Minor deadwood, Moderate deadwood | Situated on banking | Good | Good | >40 yrs | Moderate | **B** | No works required |
| T11 | Ash | *Fraxinus excelsior* | Mature | 22 | 3 | 450, 370, 230 | No | 5 | 7 | 5 | 8 | 7 | Exposed roots, Soil erosion | Multiple stemmed at base, Vertical, One stem with significant lean west, Stubs, Old pruning wounds | Overhanging adjacent land, Minor deadwood | | Good | Fair | 20 to 40 yrs | Moderate | **B** | No works required |
| T12 | Sycamore | *Acer pseudoplatanus* | Young | 8 | 1 | 120 | No | 2 | 3.5 | 2 | 0.5 | 2 | Soil erosion, Exposed roots | Single stemmed, Slight lean | Unbalanced | Situated on banking. Height estimated | Good | Fair | >40 yrs | Low | **C** | No works required |

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| | 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* |
| T13 | Sycamore | *Acer pseudoplatanus* | Young | 8 | 1 | 120 | No | 2 | 2.5 | 2 | 0.5 | 1.5 | Soil erosion, Exposed roots | Single stemmed, Slight lean, Epicormic growths | Low vigour | Situated on banking. Height estimated | Fair | Fair | 20 to 40 yrs | Low | **C** | No works required |
| T14 | Sycamore | *Acer pseudoplatanus* | Mature | 23 | 3 | 460, 370, 340 | No | 3 | 7.5 | 6 | 7 | 6 | Soil erosion, Exposed roots | Multiple stemmed at base, Vertical, Stubs | Minor deadwood, Moderate deadwood | Situated on banking | Good | Good | >40 yrs | Moderate | **B** | No works required |
| T15 | Sycamore | *Acer pseudoplatanus* | Mature | 20 | 4 | 570, 500, 310, 260 | No | 4 | 7 | 8 | 7.5 | 8.5 | Soil erosion, Exposed roots | Multiple stemmed at base, Vertical, Stubs, Old pruning wounds, Pruning wounds from crown lifting, Tight union, Partially included bark in northern stem | Minor deadwood | Top of small wall, which appears to cover watercourse leading to River Don. Very boggy under wall. | Good | Fair | >40 yrs | Moderate | **B** | No works required |
| T16 | Alder | *Alnus glutinosa* | Early-mature | 18 | 2 | 270, 250 | No | 1 | 8 | 4.5 | 4 | 0.5 | Exposed roots, Soil erosion, Waterlogged | Twin stemmed at base, Vertical, Epicormic growths | Normal | Situated on riverbank. T17 leaning in crown | Fair | Fair | 20 to 40 yrs | Moderate | **C** | No works required |
| T17 | Alder | *Alnus glutinosa* | Mature | 18 | 3 | 300, 200, 200 | Yes | 1.5 | 0.5 | 9 | 2.5 | 0.5 | Decay, Waterlogged, Exposed roots, Soil erosion | Multiple stemmed at base, Significant lean towards site, Epicormic growths | Minor deadwood | Situated on riverbank. Failed at base, leaning in T16 | Fair | Poor | <10 yrs | Low | **U** | Removal required regardless of development |

AWA TREE CONSULTANTS

| | 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* |
| T18 | Willow | *Salix fragilis* | Mature | 22 | 2 | 500, 340 | No | 1 | 8 | 6.5 | 5 | 6 | Soil erosion, Exposed roots, Waterlogged | Single stemmed at base, Twin stemmed at 1m, Vertical, Stubs, Old pruning wounds | Snapped /hanging branches | Situated by riverbank. 2nd stem snapped out at 4m, which now hosts decay fungi | Fair | Fair | 20 to 40 yrs | Moderate | **C** | No works required |
| T19 | Willow | *Salix fragilis* | Early-mature | 5 | 1 | 370 | No | 1 | 3 | 0.5 | 0.5 | 2.5 | Soil erosion, Exposed roots, Waterlogged | Single stemmed, Major decay, Snapped stem, Epicormic growths | Snapped /hanging branches, Minor deadwood, Major deadwood, Moderate deadwood | Situated by riverbank. Stem snapped at 5m, and now resting in T20 and T21 | Poor | Poor | <10 yrs | Low | **U** | Removal required regardless of development |
| T20 | Alder | *Alnus glutinosa* | Semi-mature | 10 | 1 | 250 | No | 1 | 5 | 3.5 | 0.5 | 0.5 | Soil erosion, Exposed roots, Waterlogged | Single stemmed, Epicormic growths, Old pruning wounds, Stubs, Minor cavity, Minor decay south east aspect, Slight lean east | Slightly unbalanced | Situated by riverbank. Failed stem from T19 resting in crown | Fair | Fair | 20 to 40 yrs | Low | **C** | No works required |
| T21 | Sycamore | *Acer pseudoplatanus* | Semi-mature | 11 | 1 | 290 | No | 3 | 4 | 4.5 | 6 | 1.5 | Soil erosion, Exposed roots, Waterlogged | Single stemmed, Slight lean east, Epicormic growths, Old pruning wounds | Minor deadwood, Snapped /hanging branches,Bark damage in crown | Situated by riverbank. Failed stem from T19 resting in crown. Minor branch snapout | Fair | Good | 20 to 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* |
| T22 | Alder | *Alnus glutinosa* | Early-mature | 14 | 4 | 380, 330, 320, 240 | No | 1 | 5 | 4.5 | 5.5 | 5 | Soil erosion, Exposed roots, Waterlogged | Multiple stemmed at base, Vertical, Epicormic growths, Old pruning wounds, Stubs, Cup-like union collecting dirt/water | Minor deadwood | Situated by riverbank. Dense epicormic prevented detailed inspection | Good | Good | 20 to 40 yrs | Moderate | **B** | No works required |
| T23 | Alder | *Alnus glutinosa* | Mature | 13 | 1 | 600 | Yes | 2 | 5 | 5.5 | 5.5 | 4 | Exposed roots, Soil erosion, Waterlogged | Single stemmed at base, Twin stemmed at 2m, Vertical, Tight union, Partially included bark, Epicormic growths, Major cavity, Major decay | Minor deadwood, Minor dieback | Situated by riverbank. Decay column at southern aspect, from ground level to 2.5m Strong reaction to decay at eastern aspect, less reaction to west. Short tree for age to compensate for decay | Fair | Fair | 10 to 20 yrs | Moderate | **C** | No works required |
| T24 | Sycamore | *Acer pseudoplatanus* | Early-mature | 15 | 1 | 350 | Yes | 2 | 5 | 4.5 | 5 | 5 | Soil erosion, Exposed roots, Waterlogged | Single stemmed, Slight lean east corrected in crown | Normal | Situated by riverbank | Good | Good | >40 yrs | Moderate | **C** | No works required |
| T25 | Ash | *Fraxinus excelsior* | Young | 7 | 1 | 70 | Yes | 2 | 1.5 | 1.5 | 1.5 | 1.5 | Exposed roots, Soil erosion | Single stemmed | Minor dieback | Situated riverbank. Ash dieback disease identified | Fair | Good | 10 to 20 yrs | Low | **C** | No works required |

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| | 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* |
| T26 | Alder | *Alnus glutinosa* | Early-mature | 15 | 3 | 240, 240, 220 | No | 2 | 2.5 | 4.5 | 4.5 | 5 | Soil erosion, Exposed roots, Waterlogged | Single stemmed at base, Multiple stemmed at 1m, Vertical, Stubs, Old pruning wounds, Epicormic growths, Tight union, Partially included bark | Minor deadwood | Top of riverbank. | Good | Fair | 20 to 40 yrs | Moderate | **C** | Prune to clear proposed boundary wall by 2m |
| T27 | Alder | *Alnus glutinosa* | Early-mature | 15 | 2 | 250 | Yes | 2 | 4 | 4.5 | 4 | 3.5 | Soil erosion, Exposed roots, Waterlogged | Twin stemmed at base, Vertical, Epicormic growths, Old pruning wounds, Stubs | Normal | Situated by riverbank | Good | Good | 20 to 40 yrs | Moderate | **C** | Prune to clear proposed boundary wall by 2m |
| T28 | Alder | *Alnus glutinosa* | Semi-mature | 15 | 1 | 200 | Yes | 2.5 | 2.5 | 2 | 4 | 2.5 | Soil erosion, Exposed roots, Waterlogged | Single stemmed, Vertical, Epicormic growths, Old pruning wounds, Stubs | Minor deadwood | Situated by riverbank. Access prevented detailed inspection. Tall, narrow form | Good | Good | 20 to 40 yrs | Low | **C** | No works required |
| T29 | Sycamore | *Acer pseudoplatanus* | Early-mature | 15 | 5 | 250, 200, 200, 200, 200 | Yes | 1 | 4.5 | 4.5 | 6 | 4.5 | Soil erosion, Exposed roots, Waterlogged | Multiple stemmed at base, Vertical, Old pruning wounds, Stubs, Epicormic growths, Tight union, Partially included bark, Crossing/rubbing stems | Normal | Situated by riverbank. Mutually supporting stem structure | Good | Fair | >40 yrs | Moderate | **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* |
| T30 | Alder | *Alnus glutinosa* | Early-mature | 16 | 7 | 200 avg | Yes | 1.5 | 5.5 | 5 | 6.5 | 6 | Exposed roots, Soil erosion, Waterlogged | Multiple stemmed at base, Vertical, Slight lean, Epicormic growths, Tight union, Partially included bark | Normal | Situated by riverbank. Stems leaning north and east | Good | Fair | 20 to 40 yrs | Moderate | **C** | No works required |
| T31 | Sycamore | *Acer pseudoplatanus* | Early-mature | 16 | 2 | 380, 230 | No | 3 | 6 | 6 | 7.5 | 5.5 | Soil erosion, Exposed roots, Waterlogged | Single stemmed at base, Twin stemmed at 0.5m, Vertical, Stubs, Old pruning wounds, Epicormic growths | Minor deadwood | Situated by riverbank | Good | Fair | >40 yrs | Moderate | **B** | Prune to clear proposed boundary wall by 2m |
| T32 | Sycamore | *Acer pseudoplatanus* | Early-mature | 16 | 1 | 390 | No | 3 | 5 | 5.5 | 5 | 4.5 | Soil erosion, Exposed roots | Single stemmed, Vertical, Old pruning wounds, Epicormic growths, Stubs, Tight union, Partially included bark | Normal | Situated by riverbank | Good | Good | >40 yrs | Moderate | **B** | No works required |
| T33 | Alder | *Alnus glutinosa* | Mature | 9 | 6 | 300 avg | Yes | 1.5 | 6 | 7.5 | 5 | 6 | Soil erosion, Exposed roots, Waterlogged | Multiple stemmed at base, Vertical, Slight lean, Significant lean, Stubs, Tight union, Partially included bark, Epicormic growths, Minor cavities, Minor decay | Minor dieback, Minor deadwood | Occasional young Ash at base. Situated by riverbank. Epicormic prevented detailed inspection. Leaning stems corrected | Good | Fair | 20 to 40 yrs | Moderate | **C** | No works required |

AWA TREE CONSULTANTS

| | 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* |
| G34 | Sycamore | *Acer pseudoplatanus* | Semi-mature | 7 | 3 | 130, 110, 90 | No | 1 | See Plan | | | | Soil erosion, Exposed roots | Single stemmed at base, Twin stemmed at 0.5m, Vertical, Old pruning wounds, Stubs, Epicormic growths | Minor deadwood | Situated by riverbank. Young linear group of self-set or sucker growth | Good | Good | >40 yrs | Low | C | Prune to clear proposed boundary wall by 2m |
| T35 | Alder | *Alnus glutinosa* | Early-mature | 17 | 7 | 250 avg | Yes | 1 | 5 | 4 | 6 | 5.5 | Soil erosion, Exposed roots, Waterlogged | Multiple stemmed at base, Vertical, Slight lean, Stubs, Old pruning wounds, Epicormic growths, Tight union | Minor deadwood | Situated by riverbank. Epicormic prevented detailed inspection | Good | Fair | 20 to 40 yrs | Moderate | C | Prune to clear proposed boundary wall by 2m |
| T36 | Sycamore | *Acer pseudoplatanus* | Mature | 16 | 5 | 550, 250, 210, 120, 90 | Yes | 0.5 | 5.5 | 6 | 6 | 5.5 | Soil erosion, Exposed roots, Waterlogged | Multiple stemmed at base, Large stem slight lean east, One stem significant lean east, Old pruning wounds, Stubs, Epicormic growths, Tight union, Partially included bark | Moderate deadwood, Moderate dieback | Situated by riverbank. Largest stem lean corrected. Dieback upper crown | Fair | Fair | 20 to 40 yrs | Moderate | C | Prune to clear proposed boundary wall by 2m |
| T37 | Ash | *Fraxinus excelsior* | Semi-mature | 9 | 1 | 100 | Yes | 1 | 2 | 2 | 2 | 2 | Soil erosion, Exposed roots, Waterlogged | Single stemmed, Slight lean east (corrected) | Normal | Situated by riverbank | Good | Good | 20 to 40 yrs | Low | C | No works required |

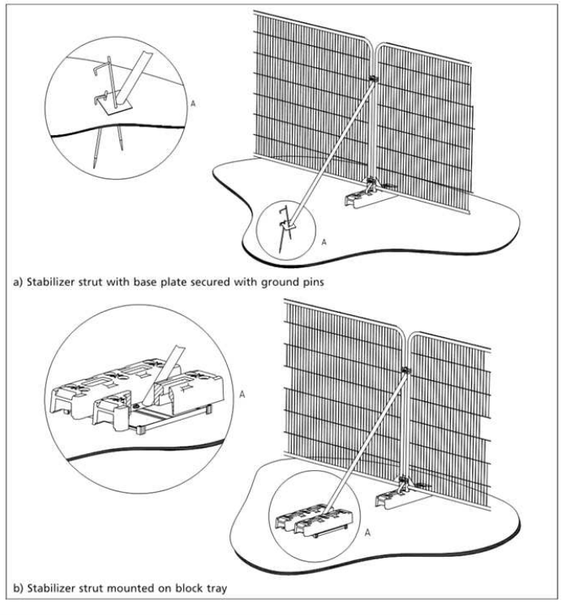
| | Tree Species | | | Measurements | | | | Crown (m) | | | | | Tree Condition | | | | | | | Value | | Management |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *Tree ID* | *Common Name* | *Latin Name* | *Maturity* | *Height (m)* | *Stems* | *Stem Diameter (mm)* | *Estimated* | *Ave Height* | *N* | *E* | *S* | *W* | *Roots* | *Stem* | *Crown* | *Comments* | *Physiological* | *Structural* | *Life Expectancy* | *Amenity* | *Category* | *Works* |
| T38 | Sycamore | *Acer pseudoplatanus* | Early-mature | 11 | 3 | 250, 200, 150 | Yes | 1 | 4 | 4 | 4.5 | 4.5 | Soil erosion, Exposed roots, Waterlogged | Single stemmed at base, Twin stemmed, Multiple stemmed at 2m, Vertical, Epicormic growths, Bark damage main stem and in crown, Tight union, Partially included bark | Normal | Situated by riverbank. Some epicormic around bark damage but no notable loss of vitality | Good | Fair | >40 yrs | Moderate | C | Prune to clear proposed boundary wall by 2m |
| T39 | Alder | *Alnus glutinosa* | Early-mature | 14 | 5 | 270, 260, 250, 250, 190 | No | 1 | 4.5 | 4.5 | 4.5 | 4.5 | Soil erosion, Exposed roots, Waterlogged | Multiple stemmed at base, Vertical, Slight lean, Stubs, Tight union, Partially included bark | Minor deadwood at southern aspect, Minor dieback, Overhanging into the site | Situated by riverbank. One juvenile Hawthorn at base. Some stems leaning south and east | Good | Fair | 20 to 40 yrs | Moderate | C | Prune to clear proposed boundary wall by 2m |
| T40 | Ash | *Fraxinus excelsior* | Semi-mature | 13 | 1 | 190 | No | 1.5 | 2 | 2 | 2.5 | 2.5 | Exposed roots, Soil erosion, Waterlogged | Single stemmed, Vertical, Stubs, Old pruning wounds, Epicormic growths | Minor dieback, Minor deadwood | Situated by riverbank. Mild Ash dieback disease. Situated at base of T39 | Fair | Good | 20 to 40 yrs | Low | C | No works required |
| T41 | Willow | *Salix chrysocoma* | Semi-mature | 7 | 1 | 250 | No | 1 | 3.5 | 3.5 | 3.5 | 3 | Exposed roots, Soil erosion | Single stemmed, Vertical | Minor deadwood | Top of riverbank, set back from water | Good | Good | >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* |
| T42 | Ash | *Fraxinus excelsior* | Semi-mature | 9 | 5 | 200, 150, 150, 100, 100 | Yes | 2 | 3.5 | 2 | 3.5 | 3 | Soil erosion, Exposed roots | Multiple stemmed at base, Vertical | Normal | No Ash dieback disease detected. By retaining wall for bridge and highway, not suitable for long-term | Good | Fair | 20 to 40 yrs | Low | **C** | No works required |
| T43 | Alder | *Alnus glutinosa* | Mature | 13 | 4 | 360, 280, 260, 240 | No | 1 | 5 | 5 | 5 | 6 | Exposed roots, Soil erosion | Single stemmed at 0.5m, Multiple stemmed, Vertical, Slight lean, Stubs, Old pruning wounds, Pruning wounds from crown lifting, Tight union, Partially included bark, Epicormic growths | Minor deadwood | Bottom of banking between site and highway | Good | Fair | 20 to 40 yrs | Moderate | **B** | No works required |
| G44 | Hazel, Willow | *Corylus sp., Salix sp.* | Semi-mature | 5.5 | 10+ | 100 avg | Yes | 1 | See Plan | | | | Soil erosion, Exposed roots | Multiple stemmed at base, Vertical, Slight lean, Tight union, Partially included bark, Crossing/rubbing stems | Normal | Group of Hazel coppice, with one young Willow stem. Situated on banking | Good | Fair | 10 to 20 yrs | Low | **C** | No works required |
| T45 | Alder | *Alnus glutinosa* | Semi-mature | 9 | 10+ | 120 avg | Yes | 1 | 3 | 2.5 | 2.5 | 3.5 | Soil erosion, Exposed roots | Multiple stemmed at base, Vertical, Tight union, Partially included bark, Epicormic growths | Overhanging adjacent land | Overhangs public highway. Situated on banking. Juvenile Ash at base | Good | Fair | 20 to 40 yrs | Low | **C** | No works required |

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| | 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 | Hawthorn | *Crataegus monogyna* | Semi-mature | 4.5 | 3 | 80 | Yes | 0.5 | 2.5 | 2.5 | 2 | 2.5 | Soil erosion, Exposed roots | Single stemmed at base, Multiple stemmed at 1m, Vertical, Tight union, Partially included bark, Crossing/rubbing stems | Normal | Situated on banking. Dense branches and thorns prevented detailed measurements | Good | Fair | >40 yrs | Low | **C** | No works required |
| T47 | Ash | *Fraxinus excelsior* | Semi-mature | 6 | 3 | 130, 100, 100 | No | 1.5 | 2 | 2 | 2.5 | 2 | Soil erosion, Exposed roots | Multiple stemmed at base, Vertical, Tight union, Partially included bark | Normal | Situated on banking. No Ash dieback disease detected | Good | Fair | 20 to 40 yrs | Low | **C** | No works required |

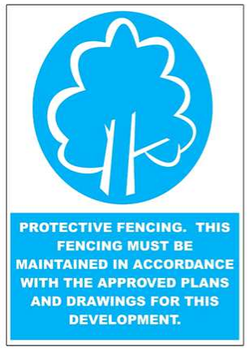
Inset 1: Secured 'Heras' type fencing with stabilizing system and fixed central pins (©BSI)



a) Stabilizer strut with base plate secured with ground pins

b) Stabilizer strut mounted on block tray

Inset 2: Figure 6: Warning sign for fencing







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**Appendix 5:**
**TREE PROTECTION PLAN**

**Land at Roughbirchworth Lane, Oxspring**
**Ref: AWA3548**

BRITISH STANDARD 5837:2012

SCALE: 1:500 PAPER: A3

| | |
|---|---|
| | TREES TO BE RETAINED |
| | TREES FOR REMOVAL |
| | TREE STEM |
| | TREE STEM TO REMOVE |
| | TREE PROTECTION FENCING |
| | RPA: ROOT PROTECTION AREA |

NORTH