



# ARBORICULTURAL METHOD STATEMENT

to BS 5837:2012 at

***Lundhill Road  
Wombwell,  
Barnsley,  
South Yorkshire  
S73 0RB***

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:  
***Persimmon Homes West Yorkshire***  
*3 Hepton Court,  
York Road,  
Leeds,  
West Yorkshire  
LS9 6PW*

Date: *December 2018*  
Reference: *AWA2238*



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## 1. Introduction

### 1.1 Instruction

- 1.1.1 We are instructed by Matt Burrow of Persimmon Homes, to prepare an arboricultural method statement for the proposed development at:  
**Lundhill Road, Wombwell, Barnsley, South Yorkshire S73 0RB**

### 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 May 2018, detailed within Appendix 4 of this report.

### 1.3 Description of Development

- 1.3.1 It is proposed to build a residential development with associated access for 150 new homes. 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 removals and pruning works
- 3 Install tree protective fencing and ground protection boards
- 4 Pre commencement meeting/ confirm fencing is as specified
- 5 Construction of development
- 6 Removal of tree and ground 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                                                                                                                                                                                                                                                                                                                              |
| <b>1 Approval</b>        | This AMS is submitted to and approved in writing by the LPA.                                                                                                                    | If necessary, liaise with contractor and LPA to discuss methodologies detailed.                                                                                                                                                                                                                                                                   |
| <b>2 Tree Work</b>       | Tree removals and pruning 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.                                                                                                                                                                                                                   |
| <b>3 Tree Protection</b> | Installation of 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 protective fencing and boards until completed to the standard specified in this method statement.                                                                                                                                                                                         |
| <b>4 Site Meeting</b>    | Following installation of Tree Protection, the LPA shall be invited to inspect all protective measures, 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.                                                                                                                                          |
| <b>5 Construction</b>    | Undertake the construction of the new development including use of specialist foundations and use of 'no-dig' hard surfaces.                                                    | Provide ongoing arboricultural advice and supervision of contractors. Installation of specialist foundations and 'no dig' hard surfaces should be done 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. |
| <b>6 Site Finishing</b>  | Removal of tree protection 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 The development will require the removal of 9 trees or groups (T2, T3, T4, G5, G6, G11, G12, G34 and G35).
- 3.1.2 In addition, a 4m section and 7m section of the hedge group G22 will require removal.
- 3.1.3 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.
- 3.1.4 All tree work should be carried out according to British Standard 3998: 2010 Tree Work - Recommendations.
- 3.1.5 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 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 BS5837 (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 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 T32 and T33. 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 hatched 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 Construction**

- 4.3.2 Proposed new houses are situated within the RPA of the retained trees, T32 and T33. 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 pile and beam type footings.
- 4.3.3 The foundations for the base are to be built upon 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.
- 4.3.4 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.
- 4.3.5 The digging and installation of the piles should be done under arboricultural supervision and a written record kept at Appendix 3.

## 4.4 Hard Surfaces

- 4.4.2 New hard surfaces, in the form of access drives and footpaths are proposed within the RPA of the retained trees.
- 4.4.3 The works within the RPA should not adversely impact on the health or future condition of the trees provided a **no-dig** method of construction is utilised in accordance with the specifications given below.
- 4.4.4 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.
- 4.4.5 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.
- 4.4.6 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>).
- 4.4.7 The construction 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.

## 4.5 Construction of new Boundary Fences

- 4.5.2 New garden boundary fencing is proposed within the RPA of a number of retained trees. 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.
- 4.5.3 The foundations for the fencing 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.

- 4.5.4 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.

## **4.6 Drainage and Utilities**

- 4.6.2 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.

## **4.7 Additional Precautions**

- 4.7.2 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.
- 4.7.3 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.
- 4.7.4 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.*

**17<sup>th</sup> December 2018**

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## Appendix 1: Images and Figures

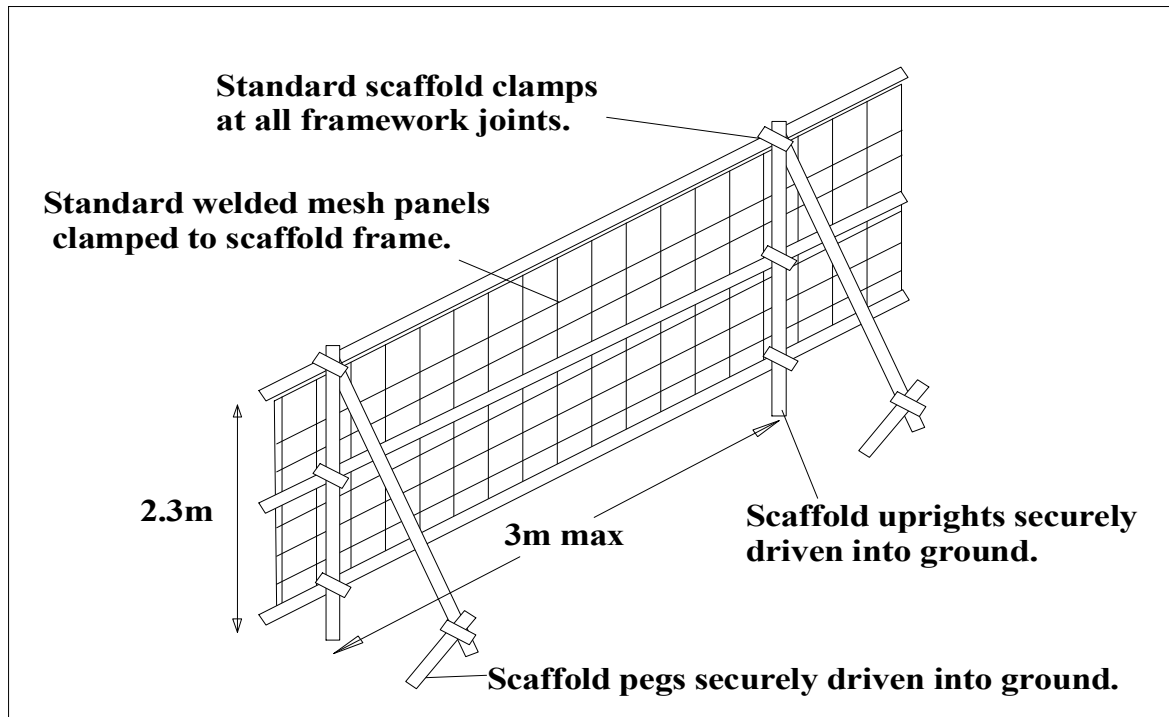


Figure 1: 'Fencing to BS 5837: 2012'.



Figure 2: 'Photo of Fencing to BS 5837: 2012'.

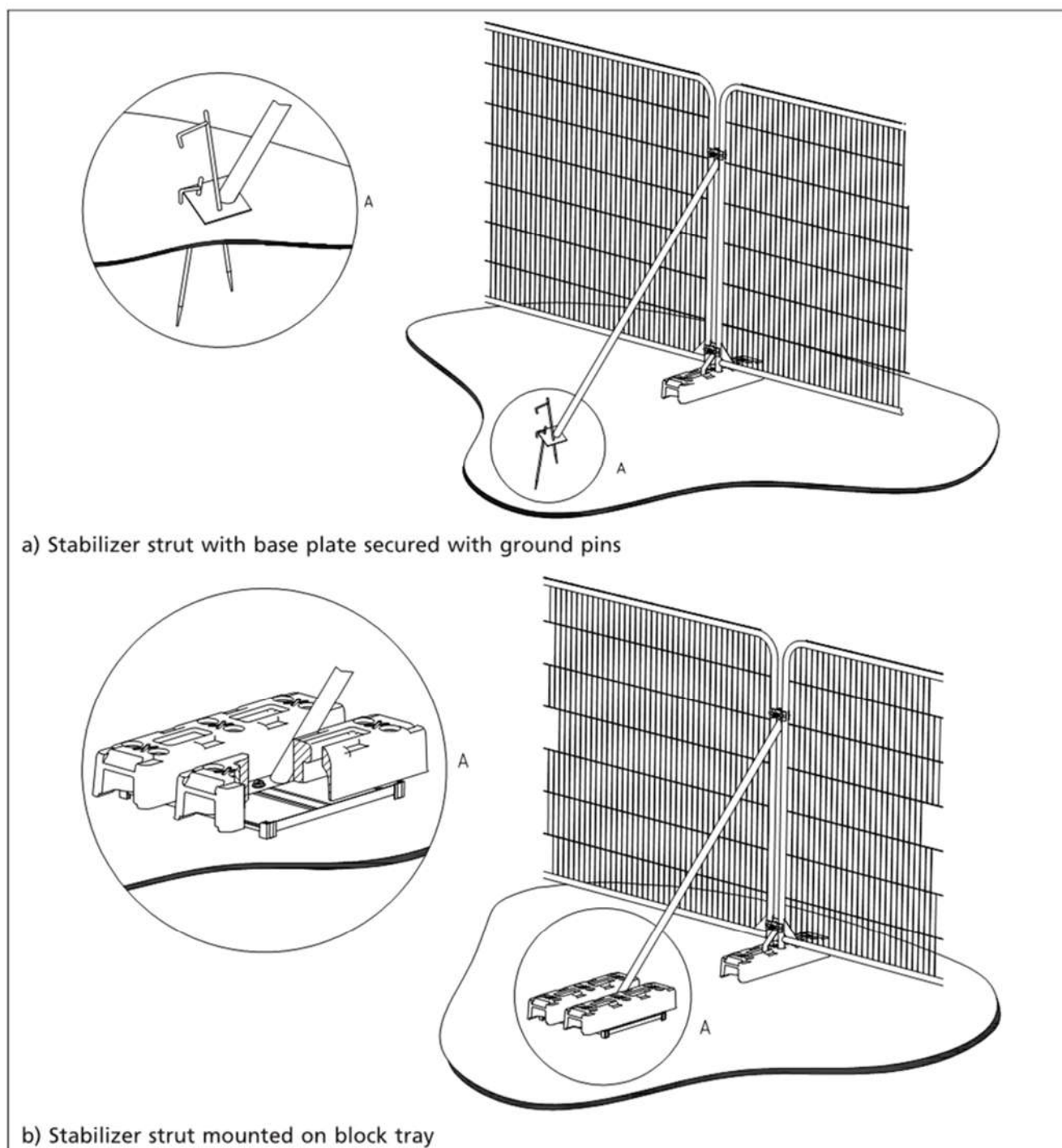


Figure 3: Secured 'Heras' type fencing with stabilizing system and fixed central pins (©BSI).



Figure 4: 'Example of warning sign for fencing '.

## Appendix 2: Relevant Contact Details

| Contact Name   | Organisation/Details                                   | Contact Number | Contact E-mail                    |
|----------------|--------------------------------------------------------|----------------|-----------------------------------|
| Matthew Burrow | Persimmon Homes West Yorkshire                         | 0113 240 9726  | matthew.burrow@persimmonhomes.com |
| Adam Winson    | AWA Tree Consultants Ltd.<br>Arboricultural Consultant | 0114 272 1124  | adam@awatrees.com                 |
| Edward Jowett  | Barnsley Tree Officer<br>Development Management        | 01226 772 557  | edwardjowett@barnsley.gov.uk      |

## Appendix 3: Record of Arboricultural Supervision

| <b>Required Site Visits</b>                                                                                                                                                                     |                                  |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------|
| <b>Name of Site Inspector/<br/>Arboricultural Consultant</b>                                                                                                                                    |                                  |
| <b>Supervision Stages</b>                                                                                                                                                                       | <b>Comments/Required Actions</b> |
| <b>Site visit 1:</b> Inspect the tree protection fencing and ground protection boards prior to any works. Confirm tree protection completed to the standard specified in this method statement. | Signed and Dated                 |
| <b>Site visit 2:</b> Supervision of contractors during installation of specialist foundations within RPA of retained trees T32 and T33.                                                         | Signed and Dated                 |
| <b>Site visit 3:</b> Supervision of contractors during installation of ‘no-dig’ hard surfaces within RPA of retained trees.                                                                     | Signed and Dated                 |
| <b>Site visits - Monthly:</b> Supervise any other sensitive operations, if required, as they arise in relation to trees.                                                                        | Signed and Dated                 |
| <b>Additional Comments / Required Actions:</b>                                                                                                                                                  |                                  |

**Additional Comments / Required Actions:**

*Signed and Dated .....*

## Appendix 4: Tree Data

|         | Tree Species                      |                                             | Measurements |            |       |               | Crown     |            |          |   |   | Tree Condition |                                                                                                                                                  |            |            | Value           |          | Management |                                            |
|---------|-----------------------------------|---------------------------------------------|--------------|------------|-------|---------------|-----------|------------|----------|---|---|----------------|--------------------------------------------------------------------------------------------------------------------------------------------------|------------|------------|-----------------|----------|------------|--------------------------------------------|
| Tree ID | Common Name                       | Latin Name                                  | Maturity     | Height (m) | Stems | Stem Dia (mm) | Estimated | Ave Height | N        | E | S | W              | Comments                                                                                                                                         | Physiology | Structural | Life Expectancy | Amenity  | Category   | Works                                      |
| T1      | Hawthorn                          | Crataegus monogyna                          | Semi-mature  | 6          | 1     | 150           | No        | 1          | 3        | 2 | 3 | 2              | Multiple stemmed at base, Old pruning wounds, Minor deadwood, Overhangs into site                                                                | Good       | Good       | 40+ yrs         | Moderate | C          | No works                                   |
| T2      | Ash                               | Fraxinus excelsior                          | Early-mature | 16         | 1     | 370           | No        | 2          | 7        | 8 | 4 | 3              | Single stemmed, Vertical, Stubs, Old pruning wounds, Minor deadwood, Boundary tree                                                               | Good       | Fair       | 20 to 40 yrs    | Moderate | C          | Removal required to facilitate development |
| T3      | Ash                               | Fraxinus excelsior                          | Semi-mature  | 11         | 3     | 90, 150, 180  | Yes       | 2          | 4        | 5 | 4 | 5              | Multiple stemmed at base, Vertical, Stubs, Old pruning wounds, Bark damage, Epicormic growths, Minor deadwood, Ivy prevented detailed inspection | Fair       | Fair       | 20 to 40 yrs    | Moderate | C          | Removal required to facilitate development |
| T4      | Ash                               | Fraxinus excelsior                          | Early-mature | 12         | 1     | 350           | No        | 1          | 3        | 5 | 4 | 4              | Single stemmed, Vertical, Stubs, Old pruning wounds, Bark damage, Epicormic growths, Minor deadwood, Ivy prevented detailed inspection           | Fair       | Fair       | 20 to 40 yrs    | Moderate | C          | Removal required to facilitate development |
| G5      | Hawthorn, Ash, Blackthorn, Cherry | Crataegus sp.<br>Fraxinus sp.<br>Prunus sp. | Semi-mature  | 5          | 10+   | 90            | Yes       | 0          | See plan |   |   |                | Single and Multiple stemmed, Stubs, Close grown, Predominantly Hawthorn with several Ash, Blackthorn and Cherry                                  | Good       | Good       | 20 to 40 yrs    | Low      | C          | Removal required to facilitate development |
| G6      | Hawthorn, Ash, Blackthorn, Cherry | Crataegus sp.<br>Fraxinus sp.<br>Prunus sp. | Semi-mature  | 5          | 10+   | 90            | Yes       | 0          | See plan |   |   |                | Single and Multiple stemmed, Stubs, Close grown, Predominantly Hawthorn with several Ash, Blackthorn and Cherry                                  | Good       | Good       | 20 to 40 yrs    | Low      | C          | Removal required to facilitate development |

|         | Tree Species |                         | Measurements |            |       |               | Crown     |            |          |   |   | Tree Condition |                                                                                                                  |            |            | Value           |          | Management |                                            |
|---------|--------------|-------------------------|--------------|------------|-------|---------------|-----------|------------|----------|---|---|----------------|------------------------------------------------------------------------------------------------------------------|------------|------------|-----------------|----------|------------|--------------------------------------------|
| Tree ID | Common Name  | Latin Name              | Maturity     | Height (m) | Stems | Stem Dia (mm) | Estimated | Ave Height | N        | E | S | W              | Comments                                                                                                         | Physiology | Structural | Life Expectancy | Amenity  | Category   | Works                                      |
| G7      | Poplar       | Populus nigra 'Italica' | Early-mature | 16         | 1     | 400           | No        | 2          | See plan |   |   |                | Single stemmed, Stubs, Old pruning wounds, 1.5 metre spacings                                                    | Good       | Good       | 20 to 40 yrs    | Moderate | B          | No works                                   |
| G8      | Poplar       | Populus nigra 'Italica' | Early-mature | 16         | 1     | 400           | No        | 2          | See plan |   |   |                | Single stemmed, Stubs, Old pruning wounds, 1.5 metre spacings                                                    | Good       | Good       | 20 to 40 yrs    | High     | B          | No works                                   |
| T9      | Poplar       | Populus nigra 'Italica' | Early-mature | 19         | 1     | 350           | Yes       | 0.5        | 3        | 3 | 3 | 3              | Single stemmed, Stubs, Old pruning wounds, Boundary tree, Good future prospects, Limited access to base of tree  | Good       | Good       | 20 to 40 yrs    | Moderate | B          | No works                                   |
| T10     | Poplar       | Populus nigra 'Italica' | Early-mature | 17         | 1     | 220           | Yes       | 2          | 2        | 2 | 2 | 2              | Single stemmed, Stubs, Old pruning wounds, Boundary tree, Good future prospects                                  | Good       | Good       | 20 to 40 yrs    | Moderate | B          | No works                                   |
| G11     | Maple        | Acer campestre          | Semi-mature  | 7          | 1     | 150           | Yes       | 1.5        | See plan |   |   |                | Single stemmed, vertical, Occasional Hawthorn, Limited access to base of tree                                    | Good       | Good       | 20 to 40 yrs    | Moderate | C          | Removal required to facilitate development |
| G12     | Hawthorn     | Crataegus monogyna      | Semi-mature  | 8          | 10+   | 80            | Yes       | 0          | See plan |   |   |                | Single and Multiple stemmed, stubs, Minor deadwood, Tight unions, Good habitat potential, Limited access to base | Good       | Good       | 20 to 40 yrs    | Moderate | C          | Removal required to facilitate development |

|         | Tree Species |                     | Measurements |            |       |               | Crown     |            |          |   |   | Tree Condition |                                                                                                      |            |            | Value           |          | Management |          |
|---------|--------------|---------------------|--------------|------------|-------|---------------|-----------|------------|----------|---|---|----------------|------------------------------------------------------------------------------------------------------|------------|------------|-----------------|----------|------------|----------|
| Tree ID | Common Name  | Latin Name          | Maturity     | Height (m) | Stems | Stem Dia (mm) | Estimated | Ave Height | N        | E | S | W              | Comments                                                                                             | Physiology | Structural | Life Expectancy | Amenity  | Category   | Works    |
| T13     | Sycamore     | Acer pseudoplatanus | Semi-mature  | 6          | 1     | 100           | No        | 0          | 4        | 4 | 3 | 4              | Multiple stemmed at base, Stubs, Epicormic growths, Tree growing around concrete post in centre      | Good       | Fair       | 20 to 40 yrs    | Low      | C          | No works |
| T14     | Sycamore     | Acer pseudoplatanus | Young        | 4.5        | 1     | 80            | No        | 1          | 2        | 2 | 2 | 2              | Multiple stemmed at base, Stubs, Epicormic growths, Boundary tree, Limited access to base            | Good       | Good       | 20 to 40 yrs    | Low      | C          | No works |
| T15     | Birch        | Betula pendula      | Semi-mature  | 2          | 1     | 100           | No        | 1          | 1        | 1 | 1 | 1              | Multiple stemmed at 0.5m, Reduced to 1m in height due to utility pruning, Crown consists of regrowth | Fair       | Fair       | 10 to 20 yrs    | Low      | C          | No works |
| G16     | Hawthorn     | Crataegus monogyna  | Semi-mature  | 8          | 10+   | 80            | Yes       | 0          | See plan |   |   |                | Single and Multiple stemmed, Stubs, Tight unions, Good habitat potential, Limited access to base     | Good       | Good       | 20 to 40 yrs    | Moderate | C          | No works |
| T17     | Hawthorn     | Crataegus monogyna  | Semi-mature  | 6          | 1     | 100           | Yes       | 0          | 3        | 3 | 3 | 3              | Single and Multiple stemmed, Stubs, Tight unions, Good habitat potential, Limited access to base     | Good       | Good       | 20 to 40 yrs    | Moderate | C          | No works |
| T18     | Hawthorn     | Crataegus monogyna  | Semi-mature  | 6          | 1     | 100           | Yes       | 0          | 4        | 4 | 4 | 4              | Single and Multiple stemmed, Stubs, Tight unions, Good habitat potential, Limited access to base     | Good       | Good       | 20 to 40 yrs    | Moderate | C          | No works |

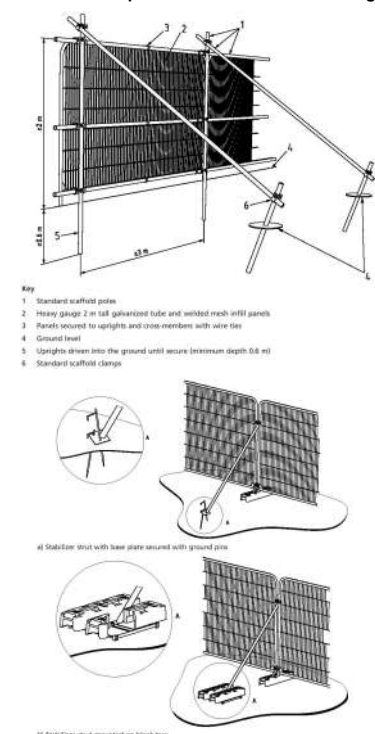
|         | Tree Species                        |                                            | Measurements |            |       |                    | Crown     |            |          |   | Tree Condition |   |                                                                                                                                       |            | Value      |                 | Management |          |                                                                            |
|---------|-------------------------------------|--------------------------------------------|--------------|------------|-------|--------------------|-----------|------------|----------|---|----------------|---|---------------------------------------------------------------------------------------------------------------------------------------|------------|------------|-----------------|------------|----------|----------------------------------------------------------------------------|
| Tree ID | Common Name                         | Latin Name                                 | Maturity     | Height (m) | Stems | Stem Dia (mm)      | Estimated | Ave Height | N        | E | S              | W | Comments                                                                                                                              | Physiology | Structural | Life Expectancy | Amenity    | Category | Works                                                                      |
| G19     | Poplar                              | Populus nigra                              | Young        | 6          | 3     | 100                | No        | 0.5        | 1        | 1 | 1              | 1 | Single stemmed, Vertical, Self-set in bramble patch, Limited access to base                                                           | Good       | Good       | 20 to 40 yrs    | Low        | C        | No works                                                                   |
| G20     | Hazel                               | Corylus avellana                           | Young        | 5          | 10+   | 50                 | Yes       | 0          | See plan |   |                |   | Multiple stemmed at base, Self-set in bramble patch, Limited access to base                                                           | Good       | Good       | 10 to 20 yrs    | Low        | C        | No works                                                                   |
| G21     | Poplar                              | Populus nigra                              | Young        | 6          | 1     | 100                | No        | 0.5        | 1        | 1 | 1              | 1 | Single stemmed, Vertical, Limited access, Occasional Hawthorn                                                                         | Good       | Good       | 20 to 40 yrs    | Low        | C        | No works                                                                   |
| G22     | Blackthorn                          | Prunus spinosa                             | Early-mature | 2.5        | 10+   | 100                | Yes       | 0          | See plan |   |                |   | Single and Multiple stemmed, Stubs, Tight unions, Managed hedge, Good screening and habitat, Occasional Hazel, Limited access to base | Good       | Good       | 20 to 40 yrs    | Low        | C        | Remove one 4m section and one 7m section to accommodate footpath/ easement |
| G23     | Hawthorn, Blackthorn, Cherry, Hazel | Crataegus sp.<br>Prunus sp.<br>Corylus sp. | Semi-mature  | 6.5        | 10+   | 150                | Yes       | 0          | See plan |   |                |   | Single and Multiple stemmed, Stubs, Tight unions, Good habitat potential, Limited access to base                                      | Good       | Good       | 20 to 40 yrs    | Moderate   | C        | No works                                                                   |
| T24     | Maple                               | Acer campestre                             | Mature       | 12         | 4     | 420, 200, 200, 180 | No        | 0          | 5        | 4 | 6              | 7 | Multiple stemmed at base, Bark wound, Snapped branches, Moderate deadwood, Attached tire swing, Boundary tree                         | Good       | Fair       | 20 to 40 yrs    | Moderate   | B        | No works                                                                   |

|         | Tree Species                        |                                   | Measurements |            |       |                    | Crown     |            |          |   |   | Tree Condition |                                                                                                             |            |            | Value           |          | Management |          |
|---------|-------------------------------------|-----------------------------------|--------------|------------|-------|--------------------|-----------|------------|----------|---|---|----------------|-------------------------------------------------------------------------------------------------------------|------------|------------|-----------------|----------|------------|----------|
| Tree ID | Common Name                         | Latin Name                        | Maturity     | Height (m) | Stems | Stem Dia (mm)      | Estimated | Ave Height | N        | E | S | W              | Comments                                                                                                    | Physiology | Structural | Life Expectancy | Amenity  | Category   | Works    |
| T25     | Maple                               | Acer campestre                    | Mature       | 10         | 4     | 300, 150, 120, 100 | No        | 0          | 7        | 6 | 4 | 4              | Multiple stemmed at base, Bark wounds, Unbalanced crown, Boundary tree                                      | Good       | Fair       | 20 to 40 yrs    | Moderate | B          | No works |
| G26     | Hawthorn, Blackthorn, Cherry, Maple | Crataegus sp. Prunus sp. Acer sp. | Semi-mature  | 7          | 10+   | 110                | Yes       | 0          | See plan |   |   |                | Single and Multiple stemmed, Managed hedge, Stubs, Tight unions, Good screening and habitat, Limited access | Good       | Good       | 20 to 40 yrs    | Low      | C          | No works |
| G27     | Ash                                 | Fraxinus excelsior                | Semi-mature  | 8          | 10+   | 150                | No        | 1          | See plan |   |   |                | Three trees forming one crown, Single stems, Minor deadwood, Stubs                                          | Fair       | Fair       | 10 to 20 yrs    | Moderate | C          | No works |
| G28     | Hawthorn                            | Crataegus monogyna                | Semi-mature  | 8          | 10+   | 80                 | Yes       | 0          | See plan |   |   |                | Single and Multiple stemmed, Stubs, Tight unions, Good habitat potential, Limited access to base            | Good       | Good       | 20 to 40 yrs    | Moderate | C          | No works |
| T29     | Hawthorn                            | Crataegus monogyna                | Early-mature | 7          | 1     | 250                | No        | 1.5        | 3        | 3 | 3 | 3              | Single and Multiple stemmed, Stubs, Tight unions, Good habitat potential, Limited access to base            | Good       | Fair       | 20 to 40 yrs    | Moderate | C          | No works |
| T30     | Hawthorn                            | Crataegus monogyna                | Early-mature | 8          | 1     | 250                | No        | 1.5        | 4        | 3 | 3 | 2              | Single and Multiple stemmed, Stubs, Tight unions, Good habitat potential, Limited access to base            | Good       | Fair       | 20 to 40 yrs    | Moderate | C          | No works |

|         | Tree Species |                    | Measurements |            |       |               | Crown     |            |          |   |   | Tree Condition |                                                                                                                                                  |            |            | Value           |          | Management |                                            |
|---------|--------------|--------------------|--------------|------------|-------|---------------|-----------|------------|----------|---|---|----------------|--------------------------------------------------------------------------------------------------------------------------------------------------|------------|------------|-----------------|----------|------------|--------------------------------------------|
| Tree ID | Common Name  | Latin Name         | Maturity     | Height (m) | Stems | Stem Dia (mm) | Estimated | Ave Height | N        | E | S | W              | Comments                                                                                                                                         | Physiology | Structural | Life Expectancy | Amenity  | Category   | Works                                      |
| G31     | Hawthorn     | Crataegus monogyna | Semi-mature  | 2.5        | 1     | 100           | Yes       | 0          | See plan |   |   |                | Single and Multiple stemmed, Stubs, Tight unions, Good habitat potential, Limited access to base                                                 | Good       | Good       | 20 to 40 yrs    | Moderate | C          | No works                                   |
| T32     | Ash          | Fraxinus excelsior | Mature       | 18         | 1     | 640           | Yes       | 2          | 7        | 6 | 6 | 6              | Single stemmed, Vertical, Moderate deadwood, Stubs, Bird box on north side of stem at 4m, Boundary tree, Drainage ditch to south, Limited access | Good       | Fair       | 20 to 40 yrs    | Moderate | B          | No works                                   |
| T33     | Ash          | Fraxinus excelsior | Mature       | 18         | 2     | 580, 550      | No        | 3          | 7        | 5 | 6 | 8              | Twin stemmed at base, Bark wounds, Moderate deadwood, Stubs, Boundary tree, Drainage ditch to south, Limited access                              | Good       | Fair       | 20 to 40 yrs    | Moderate | B          | No works                                   |
| G34     | Hawthorn     | Crataegus monogyna | Semi-mature  | 8          | 10+   | 80            | Yes       | 0          | See plan |   |   |                | Single and Multiple stemmed, Stubs, Tight unions, Good habitat potential, Limited access                                                         | Good       | Good       | 20 to 40 yrs    | Moderate | C          | Removal required to facilitate development |
| G35     | Willow       | Salix sp.          | Mature       | 16         | 10+   | 250           | Yes       | 2          | See plan |   |   |                | Single and Multiple stemmed, Slight lean, Minor deadwood, Good habitat                                                                           | Good       | Fair       | 10 to 20 yrs    | Moderate | B          | Removal required to facilitate development |
| T36     | Cedar        | Cedrus libani      | Semi-mature  | 12         | 1     | 300           | Yes       | 2.5        | 3        | 3 | 4 | 3              | Adjacent tree, Limited access, 2m from boundary fence, Single stemmed, Vertical, Ivy covered                                                     | Good       | Good       | 20 to 40 yrs    | Moderate | B          | No works                                   |

|         | Tree Species    |                                                  | Measurements |            |       |               | Crown     |            |          |   |   | Tree Condition |                                                                                                                                       |            |            | Value           |          | Management |          |
|---------|-----------------|--------------------------------------------------|--------------|------------|-------|---------------|-----------|------------|----------|---|---|----------------|---------------------------------------------------------------------------------------------------------------------------------------|------------|------------|-----------------|----------|------------|----------|
| Tree ID | Common Name     | Latin Name                                       | Maturity     | Height (m) | Stems | Stem Dia (mm) | Estimated | Ave Height | N        | E | S | W              | Comments                                                                                                                              | Physiology | Structural | Life Expectancy | Amenity  | Category   | Works    |
| T37     | Maple           | <i>Acer platanoides</i>                          | Semi-mature  | 6          | 1     | 220           | Yes       | 3          | 3        | 3 | 3 | 3              | Adjacent tree, Limited access, 1m from boundary fence, Single stemmed, Vertical, Pruning wounds - healing well, Tight union           | Good       | Good       | 20 to 40 yrs    | Moderate | C          | No works |
| T38     | Cherry          | <i>Prunus avium</i>                              | Early-mature | 7          | 1     | 300           | Yes       | 2          | 3        | 4 | 4 | 4              | Adjacent tree, Limited access, 1m from boundary fence, Single stemmed, Slight lean, Old pruning wounds                                | Good       | Good       | 20 to 40 yrs    | Moderate | C          | No works |
| T39     | Cherry          | <i>Prunus avium</i>                              | Early-mature | 6          | 1     | 300           | Yes       | 2          | 2        | 2 | 2 | 2              | Adjacent tree, Limited access, 1m from boundary fence, Single stemmed, Slight lean, Old pruning wounds                                | Good       | Good       | 20 to 40 yrs    | Moderate | C          | No works |
| T40     | Holly           | <i>Ilex aquifolium</i>                           | Semi-mature  | 5          | 1     | 200           | Yes       | 1          | 2        | 2 | 2 | 2              | Single stemmed, Vertical, Stubs, Old pruning wounds, Tight union, Boundary tree, Limited access around base                           | Good       | Good       | 20 to 40 yrs    | Low      | C          | No works |
| G41     | Hawthorn        | <i>Crataegus monogyna</i>                        | Early-mature | 2.5        | 10+   | 100           | Yes       | 0          | See plan |   |   |                | Single and multiple stemmed, Stubs, Tight unions, Managed hedge, Good screening and habitat, Occasional Hazel, Limited access to base | Good       | Good       | 20 to 40 yrs    | Low      | C          | No works |
| G42     | Leyland Cypress | <sup>x</sup><br><i>Cupressocyparis leylandii</i> | Early-mature | 3          | 10+   | 80            | Yes       | 0          | See plan |   |   |                | Single and Multiple stemmed, Stubs, Tight unions, Managed hedge, Good screening and habitat, Occasional Hazel, Limited access to base | Good       | Good       | 20 to 40 yrs    | Low      | C          | No works |

Inset 1: Examples of Tree Protection Fencing



**AWA**  
TREE CONSULTANTS

**Appendix 5:**  
**Tree Protection Plan**

Lundhill Road, Wombwell, Barnsley  
Ref: AWA2238

BRITISH STANDARD 5837:2012  
SCALE: 1:1000 PAPER: A2

Trees to be retained

Trees for removal

Shrubs to be retained

Tree stem

Tree protection fencing

Interlinked ground protection boards

RPA: Root Protection Area