

Arboricultural Method Statement

WC-168.1a

East Bank House, 2 Stubbin Fold, Holmbridge HD9 2BD



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Client:	Mr. J & Mrs. K Greenway
Site address	East Bank House, 2 Stubbin Fold, Holmbridge HD9 2BD
Grid reference:	SE 12467 07063
Report prepared by:	Jack Delaney FdSc MArborA
Date:	26 th April 2023

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1. Introduction

1.1. Introduction

- 1.1.1.** Woodsage Consulting Ltd have been instructed by ADP Architecture and Design Partnership, on the behalf of Mr J & Mrs K Greenway, to produce an Arboricultural Method Statement in relation to a proposed development at East Bank House, 2 Stubbin Fold, Holmbridge HD9 2BD (Application No: 2023/62/90650/W).
- 1.1.2.** The purpose of this report is to allow the local planning authority (LPA) to assess information regarding trees at the site as part of the planning submission, and to demonstrate to the LPA that appropriate consideration has been given to the subject of trees as part of the development proposals.
- 1.1.3.** In accordance with *BS 5837: 2012: Trees in Relation to Design, Demolition and Construction - Recommendations* (hereafter referred to as *BS 5837: 2012*), this Arboricultural Method Statement sets out to:
- Assess the quality and value of the trees on and immediately adjacent to the site.
 - Prescribe tree protection measures where necessary, which will ensure the successful retention of the retained trees at the site.
- 1.1.4.** The contents of this report are concerned with arboricultural issues alone; although other disciplines such as engineering and ecology may be referenced, it is important to gain advice from an appropriate expert on these matters.

1.2. Site Details

- 1.2.1.** The site - which is illustrated in **Fig. 1.1**, below - is centred on OS Grid Reference SE 12467 07063, and lies approximately 1 mile south-west of Holmfirth. The site is accessed north-east off Stubbin Fold.



Figure 1.1: Aerial imagery showing the approximate boundaries of the site, outlined in red (Google Earth, 2023)

- 1.2.2.** The site comprises the main detached residential property, and associated detached garage and front and rear garden areas.



1.3. Topography

- 1.3.1.** The site lies at an altitude ranging between 180 - 195 m above sea-level. The topography of the site slopes from north to south.

1.4. Desk Based Study and Planning Context

- 1.4.1.** Cranfield (2023) states that the site and surrounding area consists of Soilscape 6; these are “*Freely draining, slightly acid, loamy soils*”. No further detailed soil analysis was carried out as part of the survey.
- 1.4.2.** According to information provided on the website of Kirklees Council (2023), one tree to the rear of the property is subject to a Tree Preservation Order (TPO Ref: 04/80/t11). The site is also located within the Hinchliffe Mill Conservation Area, and therefore all trees with a stem diameter of > 7.5 cm, at 1.5 m above ground level, are afforded statutory protection.

1.5. Development Proposals

- 1.5.1.** The proposals are for a single storey side extension, a single storey replacement rear extension, and associated internal and external alterations.



2. Methods

2.1. Survey Details

- 2.1.1. The site survey was carried out on Tuesday 25th April 2023. The weather at time of survey was fine and dry, visibility of the trees was not impeded.

2.2. Survey Personnel

- 2.2.1. The survey was carried out by Jack Delaney. Jack has worked in the arboricultural sector for 15 years, holds an FdSc in Arboriculture, and is a Professional Member of the Arboricultural Association and an Associate Member of the Institute of Chartered Foresters. Jack is also a LANTRA Qualified Professional Tree Inspector and is a trained and registered user of Quantified Tree Risk Assessment (QTRA).

2.3. Survey Methodology

- 2.3.1. Only substantial trees with a stem diameter of > 75 mm were included as part of the survey, as is recommended in *BS 5837: 2012*.
- 2.3.2. The trees were inspected from ground level, using the Visual Tree Assessment (VTA, Mattheck and Breloer, 1994). Although notable defects of trees were recorded, the site survey did not constitute a full tree safety assessment. No specialist decay detection equipment was used as part of the survey, though sounding and probing tools were used where necessary.
- 2.3.3. Tree information was collected in accordance with *BS 5837: 2012*, and includes species, height, diameter, crown spread, crown clearance, age class, condition, vitality, and estimated remaining contribution.
- 2.3.4. Trees were allocated to one of four categories (U, A, B or C) as defined in **Tab. 2.1**, below, to reflect amenity value and suitability for retention, in consideration of the development proposals.

Table 2.1: *BS 5837: 2012 cascade chart (adapted from British Standards, 2012)*

<i>BS 5837: 2012</i> Category	Definition	Retention	Colour code
Category A	Trees of high quality with an estimated remaining life expectancy of at least 40 years; trees that are particularly good examples of their species, especially if rare or unusual.	Highly desirable	Light green
Category B	Trees of moderate quality with an estimated remaining life expectancy of at least 20 years; trees lacking the special quality to merit category A designation.	Desirable	Dark blue
Category C	Trees of low quality with an estimated remaining contribution of at least 10 years, or trees with a stem diameter below 150mm; unremarkable trees of very limited merit or such impaired condition that they do not qualify in higher categories.	Feasible, but should be removed if posing a constraint to development	Grey
Category U	Trees that have serious, irremediable, structural and/or physiological defects, including those that will become unviable after removal of other category U trees.	Unfeasible	Red

- 2.3.5. Subcategories 1, 2 and 3 were also given to trees, and reflect arboricultural and landscape qualities, and cultural values, respectively.
- 2.3.6. Tree heights were measured using a clinometer to the nearest metre; crown spreads were measured to the north, east, south, and west aspects, using a laser measurer to the nearest metre.



2.3.7. Where access to trees was obstructed or obscured, DBH, height, and crown spread measurements have instead been estimated.

2.3.8. The diameter at breast height (DBH) of trees was measured at 1.5 m above ground level, and rounded to the nearest centimetre. This was then used to calculate the root protection area (RPA) of trees using methods prescribed in *BS 5837: 2012*:

- For single stem trees, the RPA was calculated as a circle with a radius 12 times the DBH.
- For trees with 2-5 stems, the combined stem diameter was first calculated using the formula:

$$\sqrt{(\text{Stem 1 DBH})^2 + (\text{Stem 2 DBH})^2 + \dots (\text{Stem 5 DBH})^2}$$

- For trees with 6 or more stems, the combined stem diameter was first calculated using the formula:

$$\sqrt{(\mu \text{ DBH})^2 \times \text{number of stems}}$$

2.4. Constraints

2.4.1. The survey was constrained by the season in which it took place; certain tree pathogens, for example, the fructifications of decay fungi are only visible at specific times of the year.

2.4.2. The locations of trees plotted during the survey were aided using a topographical plan of the site; the accuracy of this plan is unknown to the author of this report.



3. Survey Results and Observations

3.1. Tree Population and Amenity Value

- 3.1.1.** The site survey identified a total of four individual trees and one group of trees with the potential to be affected by the development proposals.
- 3.1.2.** The tree species currently found at the site include noble Lawson cypress (*Chamaecyparis lawsoniana*), hawthorn (*Crataegus monogyna*), European beech (*Fagus sylvatica*) and cultivated apple (*Malus domestica*).
- 3.1.3.** All of the trees at the site are located to the rear of the property.
- 3.1.4.** The trees at the site fall predominantly within the young to semi-mature age categories, and are limited amenity value. One mature beech however, which is visible from area outside of the site, offers higher levels of amenity and ecology value, and is anticipated to present the main arboricultural constraint to the development.

3.2. Tree Categorisation

- 3.2.1.** The trees situated on or immediately adjacent to the site include one Category B tree of moderate-quality, and three Category C trees and one group of low-quality.
- 3.2.2.** There were no Category A trees of high-quality identified at the site, or Category U trees which display serious physiological and/or structural defects, identified at the site.
- 3.2.3.** A summary of the *BS 5837: 2012* categories of trees at the site is given in **Tab. 3.1**, below.

Table 3.1: Summary of tree categories

<i>BS 5837: 2012</i> Category	Description	Tree/Group Numbers	Totals
B	Trees of moderate-quality, which should where possible be retained throughout any proposed development	T001	1 Tree
C	Trees of low-quality, which should not be considered a constraint to development	T002, T003, T004 G001	3 Trees 1 Group
Subtotal:			4 Trees 1 Group

- 3.2.4.** Tree data can be viewed in **Appendix 1: Tree Survey Schedule**. Images of the trees can be viewed in **Appendix 2: Images of Trees**. Tree locations, and the above and below ground constraints posed by trees, can be viewed in **Appendix 3: Tree Protection Plan**.



4. Arboricultural Method Statement

4.1. Timing of Works

- 4.1.1. It is not the Project Arboriculturist's role to determine the timing and implementation of works on site, however, an input into the process can avoid issues once work is underway. The phasing of works should be carried out in accordance with **Tab. 4.1**, below.

Table 4.1: Timing of Works

Stage	Works
1	Site induction
2	Install temporary tree protection fencing
3	Inspection of tree protection measures by Project Arboriculturist
4	Carry out demolition and development works
5	Remove tree protection fencing
6	Final inspection by Project Arboriculturist

4.2. Site Supervision

- 4.2.1. Prior to works commencing, it is the responsibility of the main contractor, or assigned agent, to ensure that details regarding tree protection are understood and adhered to by all site personnel.
- 4.2.2. During the site induction, this Method Statement, and a copy of the **Tree Protection Plan** - provided in **Appendix 3** - should be made available to all contractors attending the site.

4.3. Construction Works within Tree Root Protection Areas (RPAS)

- 4.3.1. The removal of the existing extension footings and sections of paving within the RPA of T001 should be carried out by the use of hand operated tools only. No roots > 25 mm in diameter should be severed without first consulting the Project Arboriculturist.

4.4. Tree Protection Fencing

- 4.4.1. Tree protection barriers shall be installed prior to the commencement of development works, and should be fit for the purpose of excluding site personnel and machinery. The default specification should be in accordance with **BS 5837: 2012**.



Figure 4.1: Example of mesh welded type barriers in-situ



- 4.4.2. Specification:** Barriers shall be a minimum 2 m high, and should consist of a vertical and horizontal scaffold framework, well braced to resist impacts, as is illustrated in **Fig. 4.1**, on the previous page, and **Fig. 4.2**, below.

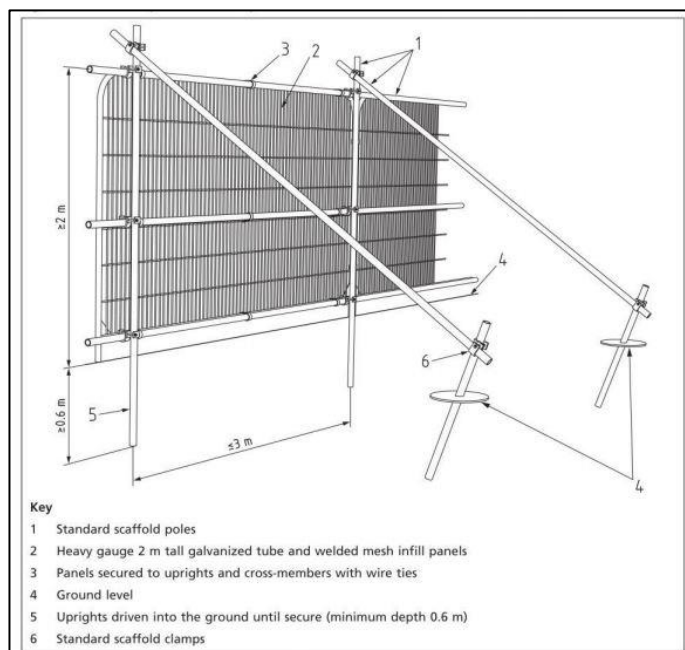


Figure 4.2: Temporary 2 m steel protective fencing

- 4.4.3.** The vertical tubes should be spaced at a minimum interval of 3 m and driven securely into the ground. Onto this framework, welded mesh panels should be securely fixed.
- 4.4.4.** All-weather notices should be attached to the barriers at 9 m intervals with the words 'TREE PROTECTION ZONE - NO ACCESS' clearly visible.
- 4.4.5. Location:** Barriers shall where possible be positioned on the perimeter of tree RPAs, as is shown in the **Tree Protection Plan** in **Appendix 3**.
- 4.4.6.** The protected area should be regarded as sacrosanct, and once installed, tree protection fencing should not be removed or altered without prior consultation with the Project Arboriculturist.
- 4.4.7.** If any breach in the tree protection measures occurs it is the Site Manager's responsibility to report this to the Project Arboriculturalist, so the appropriate measures may be taken. Any breach in the tree protection resulting in the death or damage to trees, could result in a criminal offence being committed.

4.5. Additional Details

- 4.5.1.** No materials hazardous to tree health, such as oil, bitumen or cement should be stored within the protective fencing. Where possible this area should be extended to 10 m away from the fencing. A suitable location for the storage of construction equipment and materials is shown in **Tree Protection Plan** in **Appendix 3**.
- 4.5.2.** Where there is a risk of polluted water runoff into RPAs, heavy duty plastic sheeting and sandbags must be used to contain any spillages and prevent contamination. No fires should be lit within 20 m of the protective fencing.



- 4.5.3.** As the majority of tree roots are typically found within the first 100 cm of ground level - particular attention should also be paid to existing levels - which should be observed and maintained within tree RPAs. Any unavoidable excavations into the soil within RPAs should be carried out by use of hand-operated tools only, and only under prior approval of the Project Arboriculturalist. No roots > 25 mm in diameter should be severed without first consulting the Project Arboriculturalist.

4.6. Responsibility and Site Management

- 4.6.1.** It is the responsibility of the main contractor or assigned agent to ensure that details regarding tree protection are understood and followed by all site personnel.
- 4.6.2.** It is recommended that inspections by the Project Arboriculturalist are undertaken at the following stages:
1. Once tree protection fencing has been installed, to determine if these measures are satisfactory.
 2. Upon completion of the development works.
- 4.6.3.** After each inspection, a letter should be submitted by the Project Arboriculturalist to the LPA Arboricultural Officer, to confirm if the method statement has been followed correctly, and if trees have not been adversely affected by construction works.

4.7. Project Arboriculturalist Details:

Mr Jack Delaney
Woodsage Consulting Ltd
Unit 2, Hey End Farm,
Shield Hall Lane,
Luddendenfoot,
West Yorkshire HX2 6JN

4.8. Additional Information

- 4.8.1.** All visual observations and recommendations specified within this document relate to the condition of the trees and surroundings at the time of the survey. As such, any subsequent changes to landform in the proximity of the trees could invalidate the advice given.
- 4.8.2.** Trees provide valuable habitat for wild birds, bats, and various other forms of wildlife. In accordance with the Wildlife and Countryside Act 1981, the risks posed to these should be suitably assessed before any recommendations within this report are completed.
- 4.8.3.** Trees are dynamic living organisms, and their condition can change rapidly; the information given in this report is therefore valid for a period of 18 months. This period may be reduced if significant changes occur to the trees, or the ground conditions, which surround them.



References

- British Standards (2012). *BS 5837: 2012: Trees in Relation to Design, Demolition and Construction – Recommendations*. London: British Standards Institute.
- Cranfield (2023) *Soilscapes* [online]. Available at: >www.landis.org.uk/soilscapes< [accessed 26th April 2023].
- Google Earth (2023). *Google Earth* [online]. Available at: >www.google.co.uk/earth< [accessed 26th April 2023].
- Kirklees Council (2022) *Interactive Mapping Service* [online]. Available at: >www.kirklees.gov.uk< [accessed 26th April 2023].
- Lonsdale, D (2015) *The principles of Tree Hazard Assessment and Management*. Stonehouse: The Arboricultural Association.
- Mattheck, C., Breloer, H. (1994). *The Body Language of Trees, a Handbook for Failure Analysis*. London: Her Majesty's Stationary.



Appendices

Appendix 1: Tree Survey Schedule

Table Key					
Tree/Group Ref: Reference numbers, as illustrated in Appendix 3: Tree Protection Plan			DBH: Diameter at breast height (1.5m), in millimetres		
Height (Ht.): Overall height of tree, measured to nearest metre			SULE: Safe useful estimated life expectancy of tree, in years		
Crown Spread (CS): Radius of crown to N, E, S, and W aspects, measured to nearest metre			Crown Clearance (CC): Clearance from ground level of lowest branch, measured to nearest metre		
Structural Condition (SC): An assessment of structural condition. G = Good; F = Fair; D = Decaying; C = Collapsing; PD = Physical Defect			Vitality (V): An assessment of physiological condition for species and age of tree. F = Fair; P = Poor; D = Dead		
Species: Common (and <i>binomial name</i>)			#: Denotes estimated value		
Age	Young (Y): Newly planted or self-seeded tree		Early-mature (EM): Trees in second-third of life expectancy for species type		Over-mature (OM): Mature trees which have entered stages of natural decline
	Semi-mature (SM): Trees in within first-third of life expectancy for species type		Mature (M): Trees in final-third of life expectancy for species type		Veteran (V): Trees of any age, which display ancient characteristics
BS 5837: 2012 Categories	Category A: Trees of high-quality with an estimated remaining life expectancy of at least 40 years, and that are particularly good examples of their species type			Category C: Unremarkable trees of low-quality offering limited arboricultural merit and/or of such impaired condition that they do not warrant in higher categorisation	
	Category B: Trees of moderate-quality with an estimated remaining life expectancy of at least 20 years, though lacking the necessary qualities to warrant Category A designation			Category U: Trees which display serious, irremediable, structural and/or physiological defects	

Individual Trees

Tree Ref:	Species	Age	SULE	Ht.	DBH	CS				CC	Comments	V	SC	BS 5837:2012 Category	Recommendations
						N	E	S	W						
T001	Common Beech (<i>Fagus sylvatica</i>)	M	40-80	18	1020	10	9	8	9	4	Bifurcates at 2 m into three co-dominant primary stems; unions are acute and possibly included. Lapsed pollard, previously reduced to 7 m, with approx. 10 m regen. growth.	G	PD	B2	No works recommended
T002	Cultivar Apple (<i>Malus domestica</i>)	Y	10-20	5	120	2	1	1	1.5	1.5	Suppressed by adjacent tree, with asymmetrical crown spread to north in result.	F	PD	C1	No works recommended



Tree Ref:	Species	Age	SULE	Ht.	DBH	CS				CC	Comments	V	SC	BS 5837:2012 Category	Recommendations
						N	E	S	W						
T003	Common Hawthorn (<i>Crataegus monogyna</i>)	SM	40-80	6	160	2.5	2.5	2.5	2.5	2	No obvious significant defects, though lacks qualities for higher BS 5837 categorisation.	G	G	C1	No works recommended
T004	Cultivar Apple (<i>Malus domestica</i>)	Y	10-20	5	110	1.5	2.5	2	1	0	Suppressed by adjacent tree, with asymmetrical crown spread to north in result.	F	PD	C1	No works recommended

Groups of Trees

Group Ref:	Species Composition	Age	SULE	Av. Ht.	Av. DBH	Approx. No. of Stems	CC	Comments	V	SC	BS 5837:2012 Category	Recommendations
G001	Lawson Cypress (<i>Chamaecyparis lawsoniana</i>)	SM	20-40	5	100	10	0	Linear group forming hedge. No obvious significant defects, though lacks qualities for higher BS 5837 categorisation.	F	G	C1	No works recommended.



Appendix 2: Images of Trees



Plate 1: T001



Plate 2: T002 (right) & T003 (left)



Plate 3: T004 & G001



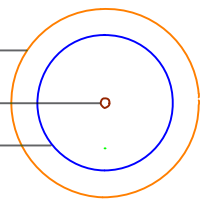
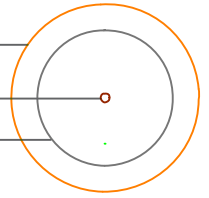
Plate 4: T001 and existing extension

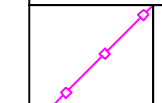
Appendix 3:
Tree Protection Plan

Project:	East Bank House, 2 Stubbin Fold, Holmbridge HD9 2BD
Drawn by:	Jack Delaney
Date:	26th April 2023
Scale:	1:100 @ A1
Drawing Number:	WC-168.1a.6

**Do not scale off this drawing - to
be reproduced in colour only**

Map Key:

Category B trees of moderate-quality	
Root protection area (RPA)	
Tree stem	
Tree canopy	
Category C trees/groups of low-quality	
Root protection area (RPA)	
Tree stem	
Tree canopy	

 Temporary tree protection fencing, to BS 5837: 2012 specification, as detailed in the **Arboricultural Method Statement**

