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arboricultural consultants



Location:  
**7 Manor Drive  
Hilton**

Report Type:  
**Arboricultural Survey  
Arboricultural Impact Assessment  
Arboricultural Method Statement  
Tree Protection Plan**

Ref:  
**ARB/AE/2524**

Date:  
**January 2021**

# Contents

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- 1 Introduction
- 2 Site Information
- 3 Tree Quality Assessment
- 4 Design Proposals and Arboricultural Impact Assessment
- 5 Arboricultural Method Statement - Pre-construction & Site Preparation Works
- 6 Arboricultural Method Statement - Tree Protection measures During Construction
- 7 Arboricultural Method Statement - Tree Protection measures Following Construction

## Appendices

- 1 Tree Details
  - Tree Group Details
  - Hedgerow Details
- 2 Arboricultural Tasks Sequence Table
- 3 Tree Constraints Plan
- 4 Design & Impact Plan
- 5 Tree Protection Plan

# 1 Introduction

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- 1.1 This report has been prepared by Andrew Elliott of Elliott Consultancy Ltd on behalf of the applicant.
- 1.2 Elliott Consultancy Ltd was commissioned to visit the site to inspect the trees and to produce an arboricultural report in accordance with British Standard 5837:2012 '*Trees in Relation to Design, Demolition & Construction*'.
- 1.3 **Scope of the report:**
- This report provides arboricultural information and advice in relation to the proposed construction of new extension to the current building – as shown within Appendix 4.
  - It should be used to guide the construction process in order to minimise potential damage to retained trees.
  - Section 4 provides a summary of the design proposals and their impact on the current tree population.
  - Sections 5 - 7 provide a method statement that details all measures recommended for adequate tree protection including any special construction measures to be utilised.
  - Within the Arboricultural Tasks Sequence Table (Appendix 2), is a timescale for implementation of these tree works and protective measures in reference to the development period.
- 1.4 **Prior to site works commencing, the Arboricultural Method Statement needs to be passed to the site manager or contractor and used as reference during the development period, with particular attention paid to Sections 5-7, and Appendices 3-5.**

## 2 Site Information

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- 2.1 7 Manor Drive is a detached two-storey residential dwelling set within its own gardens. Figure 1 shows the site extents:



**Figure 1: Site location highlighted**

- 2.2 Tree cover pertinent to these proposals includes a single mature Sycamore located within the adjacent garden.
- 2.3 Any access or visibility constraints will be detailed within the tree data (Appendix 1).

### 3 Tree Quality Assessment

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3.1 BS5837:2012 notes that all trees apart from those with stem diameters <150mm or classified as Category U should be viewed as a site constraint. When inspected, each tree and or group feature is assigned one of four categories that signify how suitable that tree/group would be for retention within any development proposals, and therefore the degree to which it should constrain the site. The four categories are as follows:

3.2.1 **Category A** trees are those of high quality and value, and of a condition whereby they could make a substantial contribution to the site. Such trees should be retained and offered adequate consideration during the design phase and physical protection during the construction phase in accordance with BS 5837:2012.

3.2.2 **Category B** trees are those of moderate quality and value, and of a condition that still make a substantial contribution to the site. Category B trees should be retained wherever possible and offered adequate consideration during the design phase and physical protection during the construction phase in accordance with BS 5837:2012.

3.2.3 **Category C** trees are considered to be of low quality and value, or lacking stature, but of an adequate condition to remain in the short-term. These trees can also be retained if required but where they form a significant constraint to development their removal should be considered. Where they are to be retained they should be afforded adequate consideration during the design phase and physical protection during the construction phase in accordance with BS 5837:2012.

### 3 Tree Quality Assessment (cont)

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3.2.4 **Category U** trees are of such a condition that any existing value would be lost within 10 years. As a result it is recommended that Category U trees are not considered a constraint for development and are removed prior to construction commencing.

3.3 In addition to the four main categories explained above, each tree/group is assigned a sub-category which signifies its overriding value as determined by the surveyor, which is noted by adding a suffix of 1, 2 or 3 alongside the category letter. 1 signifies that the trees/groups main value is arboricultural e.g. it may be a particularly good example or may be rare. A 2 signifies that the overriding factor was due to the landscape value that the tree/group provides e.g. it may be part of a group feature such as a screen. A 3 indicates that a cultural factor was the overriding value e.g. it may have historical or commemorative importance.

## 4 Design Proposals and Arboricultural Impact

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4.1 This section concentrates on the proposals and how they relate to the trees. Proposals are shown within Appendix 4, and include the extension of the existing building footprint to the rear of the property creating a deeper garage area and with a further room located above.

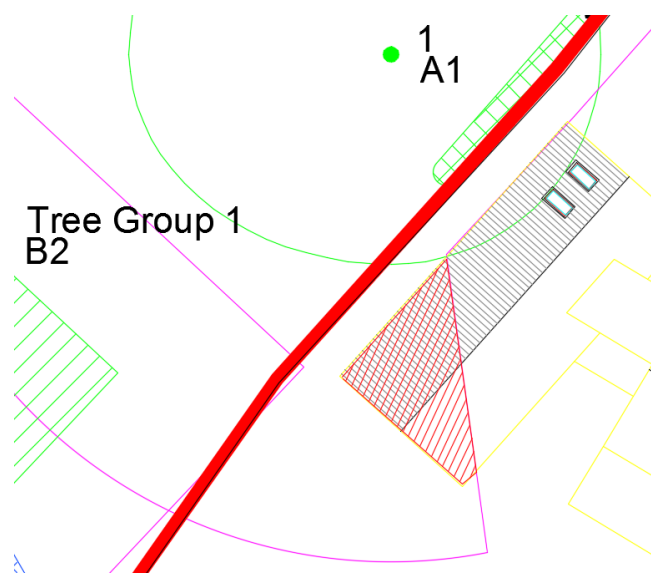
### 4.2 **Potential Conflict 1: Loss of trees to allow construction.**

The design does not require the removal of any trees.

**Mitigation / Countermeasure:** No mitigation or countermeasures are required.

### 4.3 **Potential Conflict 2: Damage to Tree 1 due to the new extension.**

The extension to the rear of the existing garage area is within the root protection area (RPA) of Tree 1 and could cause damage to underlying root tissue.



**Figure 2: Red hatched area shows conflict within RPA**

**Mitigation / Countermeasure:** The new garage and house footprint extends into the trees RPA by 7% of the overall recommended protection zone. In mitigation for this it is noted that some of the encroachment is over ground already hard-surfaced and which may not be as profitable for root growth as the unsurfaced lawn areas which will remain unaltered. It would not be expected that such a minor encroachment would have a significant impact on the trees physiological or structural condition. Ground protection measures to protect the lawned areas to the rear of the building from compaction damage can be undertaken to ensure no unnecessary damage occurs.

## 4 Design Proposals and Arboricultural Impact

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### 4.4 Potential Conflict 3: Proximity of Tree 1 branches to new roofline.

The new roofline may create conflict with the lower overhanging branches of Tree 1.

**Mitigation / Countermeasure:** The design of the house with a pitched side roof, allows for overhanging foliage to be retained. The overhang by Tree 1 of the existing roof is for the majority less than 2m at most, and at 5m height. Any proximity issues therefore would be expected to be minimal in the future and easily managed by small-diameter branch reduction - but this is not expected to be required. **N.b.** the homeowner did note on site that the tree owner has an, as yet uncompleted, authorised application to reduce the crown to all sides which will further negate this as a potential conflict.



## 5 Pre-Development and Site Preparation Works

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- 5.1 Refer to Appendix 2 for stage specific tasks.
- 5.2 Prior to any site work the ground compaction measures within the rear garden need to be installed as shown on Appendix 5. The specification for this can be relatively lightweight given the proposals, and basic ground-protection boards as shown below can be used to adequately protect the ground from compaction but also against any material spillage etc:



- 5.3 Construction material storage must be confined to an area identified outside of all root protection areas and construction exclusion zones (see Appendix 5) but the front hard-surfaced driveway would be considered acceptable.

## **6 Tree protection measures during construction**

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- 6.1 Refer to Appendix 3 for stage specific tasks.
- 6.2 All ground levels where trees are located should be maintained. Changes to soil levels adjacent to trees can severely affect the trees structural integrity and its ability to gain moisture and nutrients from the surrounding soil. Unavoidable level changes that may affect retained trees, and not already accounted for within this method statement, should be assessed by a qualified arboriculturalist so that any mitigation or special construction techniques can be considered.
- 6.3 Building material storage and operations that can contaminate soil, such as cement mixing, must be confined to areas outside the construction exclusion zone.
- 6.4 Fires on site will not be lit.
- 6.5 The tree should not be used to attach notices, cables or other services.

## **7 Tree protection measures post-construction**

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- 7.1 Refer to Appendix 2 for stage specific tasks.
- 7.2 Only once all construction works have been completed can the protective ground cover be removed.

## Appendix 1: Tree Data

### Key to tree survey headings:

- **Species** – Common name of each tree
- **DBH** – Average 'Diameter at breast height' in mm taken on stem at 1.5m.
- **Hgt** – Average Height in metres of each tree
- **Average spread:** Crown spread in metres to from centre of stem
- **CH** – Crown clearance from ground to lowest branches
- **Age** – Age-class of tree: Y = Young, SM = Semi-mature, M = Mature, OM = Over-mature.
- **General observations** – details both Physiological and structural Condition
- **Est Con** – Estimated life expectancy / contribution to the landscape (in years): 0-10, 10-20, 20-40, 40+
- **Recommendations** – Any recommendations that, regardless of land use, require attention.
- **BS. Cat** – Retention category. **A**, **B**, **C**, or **U**. For retained trees **A** being of the highest quality, **C** being the lowest. Category **U** trees for removal regardless of design. Category A, B, & C are given sub-catagories 1, 2, & 3 – details of which are shown in appendices.

# Tree Survey Data

No.	Species	Age	DBH	Stems	Height	Crown Spread				CH	EstD	General Observations	EstCont	BS Cat	Recommendation
						N	S	E	W						
1	Sycamore	M	120	1	20	10	8	8	10	4	Y	Off-site. Large stemmed spreading tree in reasonable condition. 3m overhang of boundary at 4-6m height over the existing garage.	40+	A1	No work required

# Group Data

Group Number	Dominant Species	Lesser Species	DBH	Average Height	Age	Average Spread	Condition/Comments	Recommendations	EstCont	BS Cat
1	Silver Birch Spruce spp		20	14	SM	3	Off-site. Small group in neighbors garden. Suitably discrete from construction area to be protected from impact - no overhang or extended root extension into the construction zone.	No work required	40+	B2

# Hedgerow Data

Hedge Number	Dominant Species	Lesser Species	Age	Average Height	Average Depth	Historically Managed Height	Historically Managed Depth	Condition/Comments	Recommendations	EstCont	BS Cat
1	Privet		EM	2	0.25	As current height	As current depth	Off-site. Well maintained. No overhang.	No work required	20+	C2

## Appendix 2: Arboricultural Tasks Sequence Tables

Tree or Group Number	Pre-Demolition & Construction Stage	Construction Stage	Post Construction Stage
All trees	Adhere to Section 5. Place ground protection to the rear of the property as shown on Appendix 5.	Adhere to specification within Section 6.	Adhere to specification within Section 7.  Remove tree protection measures.



1:250

0 2.5 5 7.5 10 12.5 15 17.5 20 22.5 25 [m]



3



Hedgerow 1  
C2

1  
A1

Tree Group 1  
B2



Tree Position -  
BS5837 Category A

Tree Group

Hedge

Root Protection Area

Photo Number, Position  
and Aspect

1/G1 Tree/Group

A1/B1/  
C1/U BS5837 Retention Category



APPENDIX 3

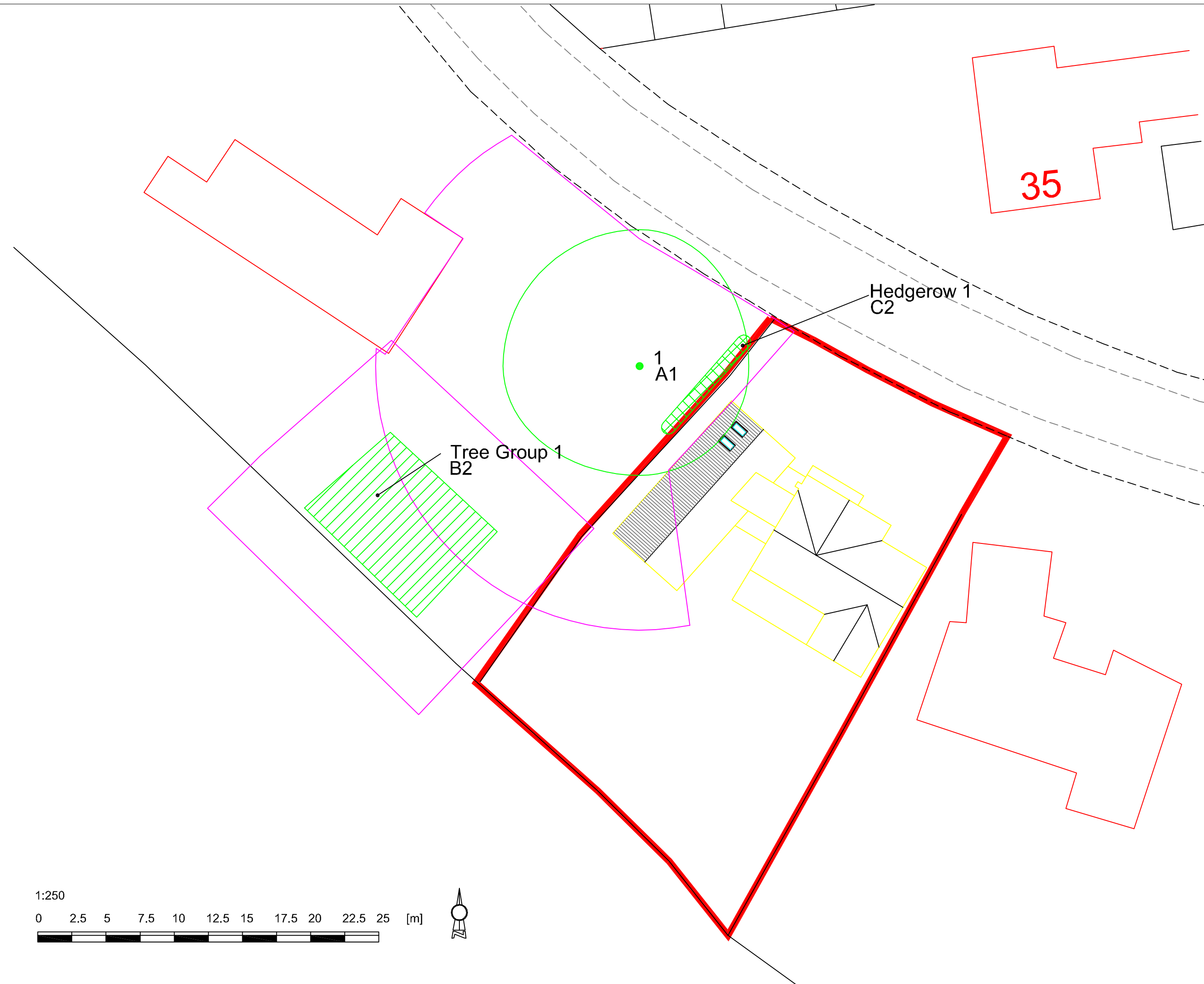
Drawing Title: Tree Constraints Plan

Project: 7 Manor Drive, Hilton

Drawing Number: ARB/AE/2524/TCP

Date: Jan 2021

Scale: 1:250 @ A3



 Tree Position -  
BS5837 Category A

 Tree Group

 Hedge

 Root Protection Area

1/G1 Tree/Group

A1/B1/  
C1/U BS5837 Retention Category

**APPENDIX 4**

Drawing Title: Design & Impact Plan

Project: 7 Manor Drive, Hilton

Drawing Number: ARB/AE/2524/TiP

Date: Jan 2021

Scale: 1:250 @ A3

1:250

0 2.5 5 7.5 10 12.5 15 17.5 20 22.5 25 [m]



35

Hedgerow 1  
C2

1  
A1

Tree Group 1  
B2



Tree Position -  
BS5837 Category A



Tree Group



Hedge

1/G1

Tree/Group

A1/B1/  
C1/U

BS5837 Retention Category



Construction Exclusion Zone



Compaction protection

1:250

0 2.5 5 7.5 10 12.5 15 17.5 20 22.5 25 [m]



**APPENDIX 5**

Drawing Title: Tree Protection Plan

Project: 7 Manor Drive, Hilton

Drawing Number: ARB/AE/2524/TpP

Date: Jan 2021

Scale: 1:250 @ A3