



# Tree Consultancy Group

Arboriculture - Urban Forestry - Planning

## ARBORICULTURAL ASSESSMENT

### ORCHARD AT THE FORMER DINGLETON HOSPITAL MELROSE

**Client :** Aitken Turnbull Architects

**Date:** 8th October 2021

**Ref:** DH1021



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## 1 INTRODUCTION

### Instructions

- 1.1 We have been instructed by Aitken Turnbull Architects to carry out an assessment of the tree cover within a specified area of land at the former Dingleton Hospital near Melrose. A development of the site is under consideration, and an arboricultural assessment carried out in accordance with BS5837: 2012 "*Trees in relation to design, demolition and construction - Recommendations*" is required to assist with the design and planning processes.

### Documents Supplied

- 1.2 We have been supplied with the following documents:-
- a digital survey plan for the site.

### Site Visit

- 1.3 We carried out an assessment of the trees in October 2021 when the weather was clear and dry.

## 2 GENERAL DESCRIPTION

### The Site

- 2.1 The survey site comprises the orchard in the grounds of the former Dingleton Hospital. It is roughly rectangular in shape and extends to approximately 0.1ha. immediately adjacent to the B6359.
- 2.2 Tree cover at the site consists primarily of various varieties of culinary apple *Malus domestica* cvs. species and plums *Prunus domestica*, planted in a formal grid pattern. Most trees are mature, with several younger replacement plantings for failed trees. Little recent management appears to have been carried out, but the trees as a whole reflect active management over many years and are mostly producing good crops of fruit. However, their individual condition is highly variable. Several are poor and declining, or have extensive decay in old pruning wounds indicating that they have limited future useful life expectancies.
- 2.3 In addition to the planted fruit trees, there is a dense group of blackthorn at the north-east corner adjacent to the road, arising from the vigorous rootstock of a long-lost plum tree (the domestic plum is grafted onto rootstock of blackthorn, which suckers freely). This is invasive and should be cleared from the site. There is also a multi-stemmed hawthorn against the boundary wall in the eastern boundary. It is in poor condition and should be removed to mitigate the risk of structural damage to the wall.

### 3 THE TREES

#### Scope of Tree Survey

- 3.1 All the trees within the defined area were included in the survey.

#### Tree Assessment Methodology

- 3.2 The tree survey was carried out in accordance with the requirements of section 4 of BS5837: 2012. The trees were assessed to establish their general condition and their suitability for retention within any future development of the site. They were visually inspected and assessed from ground level. No specialist investigations were undertaken.

#### Data Collected

- 3.3 Detail on the trees is given in the survey schedule attached at Appendix 1. The schedule has been prepared to accord with sections 4.4, 4.5 and 4.6 of BS 5837: 2012 and gives the following information: -

- **Tree number** – The trees are numbered in accordance with the Tree Survey Plan attached at Appendix 2.
- **Species** – Given by the common name.
- **Height** – The estimated height, informed by clinometer readings where space, site conditions and access allowed.
- **Crown radius** – Where the crowns are balanced, an average figure is given. Where crowns are asymmetrical, the radii to the four compass points are given.
- **Stem diameter** – Diameters were measured using calibrated tape at approximately 1.5 metres above ground level.
- **Height of crown development** – The height, above adjacent ground level, at which the crown develops (i.e. the height of the first major branches).
- **Age** - Trees are categorised as Y = Young, MA = Middle-Aged, EM = Early mature, M = Mature or OM = Over-mature (i.e. senescent and declining).
- **Physiological condition** – An assessment of the overall health and vitality of the tree, given as Good, Fair, Poor or Dead.
- **Comments** – A brief description of the tree's form, along with details of any clearly visible decay, fungal infection or physical defects.
- **Preliminary management recommendations** – Description of any necessary or desirable surgery works which should be carried out prior to development.
- **Estimated remaining contribution** – The estimated future safe life expectancy in years. These are given as <10, 10 – 20, 20 – 40, and 40+ to accord with Table 1 of BS5837: 2012.
- **Category** - To indicate the relative value of individual trees, they are placed in the categories suggested in British Standard 5837: 20012. These are: -
  - **A - Trees of high quality and value** : Those in such a condition as to be able to make a substantial contribution (a minimum of 40 years is suggested).

**B - Trees of moderate quality and value** : Those in such a condition as to be able to make a significant contribution (a minimum of 20 years is suggested).

**C - Trees of low quality and value** : Trees in adequate condition to remain until new planting could be established (a minimum of 10 years is suggested).

**U - Trees for removal:** Trees which are unsuitable for retention within a development context as they are dead, dying, structurally compromised or otherwise have a future safe life expectancy of less than 10 years.

While all trees are a material consideration in the planning process, it is only Category A and Category B trees which should be regarded as being material constraints. Category C trees generally should not influence layout and design, and should only be retained where they do not cause conflict or design difficulties.

- **RPA Radius** – The root protection area (RPA) radius as given in Annex D of BS5837:2012 calculated using the formulas given at 4.6.1 of BS 5837: 2012. This is the minimum recommended area around the tree within which no construction, excavation, soil stripping, levels changes or other potentially harmful activities should take place unless appropriate precautions or techniques are employed to avoid root damage. This area should be protected by fencing for the duration of any development works to avoid damage to the root system. The extent of the root protection areas for trees suitable for retention are shown as red dashed lines on the plan at Appendix 2.

### **Limitations of Survey**

- 3.4 The tree descriptions given in this report are based on visual assessments made from ground level on the survey date as far as access allowed. The descriptions and value categories given in the survey schedule are therefore conditional on the absence of significant defects which could not be seen from the available locations.

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Chartered Arboriculturist

for Tree Consultancy Group

8th October 2021

## **Appendix 1**

### **Tree Survey Schedule**

# TREE SURVEY SCHEDULE

SITE : Dingleton Hospital Orchard

SURVEY DATE: October 2021

Tree No.	Species	Height (m)	Crown Radius (m)	Stem Diameter (m)	Height of crown development (m)	Age class	Physiological condition	Comments	Preliminary management recommendations	Estimated remaining contribution (years)	Category	RPA Radius (m)
1	Apple <i>Malus domestica</i>	4	2n 3e 3s 3w	0.23 @base	1.0	M	Fair	Multi stemmed above fork at 0.5, slightly offset to north.	Maintain pruning for fruit production.	20-40	C	2.7
2	Apple	3	1n 3e 2s 2w	0.13	1.0	SM	Good	Upright open spreading crown slight slightly offset to east.	Maintain pruning for fruit production.	20-40	C	1.5
3	Blackthorn <i>Prunus spinosa</i>	4	2n 1.5e 4s 3w	0.18	1.8	SM	Fair	Remaining stem of formerly twin stemmed tree. Probably originally rootstock of long-gone plum (which is grafted onto the stock) which is now generating very dense thicket of suckers. History of pruning. Liable to damage wall and best removed along with suckers.	Fell	<10	U	-
4	Apple	6	4n 4e 2s 3w	0.29	1.0	M	Poor	Declining with decay and crown dieback.	Fell	<10	U	-
5	Apple	6	3n 4e 3s 3w	0.15, 0.16 (= 0.22)	1.0	M	Fair	Forked near base with upright open spreading crown.	Maintain pruning for fruit production.	20-40	C	2.7
6	Apple	6	3n 4e 4s 2w	0.27 @base	1.0	M	Fair	Triple stemmed from near base with upright open spreading crown.	Maintain pruning for fruit production.	20-40	C	3.3
7	Apple	6	3n 3e 4s 1w	0.23	1.8	M	Fair	Single stemmed with open spreading crown slight slightly offset to north east due to clearance from power line.	Maintain pruning for fruit production.	20-40	C	2.7
8	Apple	6	3n 3e 3s 2w	0.24	1.8	M	Good	Single stemmed with open spreading crown heavily reduced to clear power line.	Maintain pruning for fruit production.	20-40	C	3.0
9	Apple	3	1n 3e 1s 1w	0.07	0.5	SM	Poor	Poor small tree with limited future potential.	Maintain pruning for fruit production.	10-20	C	0.9
10	Apple	4	1n 1e 3s 2w	0.09, 0.08 (= 0.12)	1.7	SM	Fair	Twin stemmed from ground level with upright open spreading crown.	Maintain pruning for fruit production.	<10	U	-

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SURVEY DATE: October 2021

Tree No.	Species	Height (m)	Crown Radius (m)	Stem Diameter (m)	Height of crown development (m)	Age class	Physiological condition	Comments	Preliminary management recommendations	Estimated remaining contribution (years)	Category	RPA Radius (m)
11	Apple	3	1	0.05, 0.04	1.0	SM	Poor	Small poor tree with little future potential.	Maintain pruning for fruit production.	<10	U	-
12	Apple	3	1	0.05, 0.04	1.0	SM	Poor	Small poor tree with little future potential.	Maintain pruning for fruit production.	<10	U	-
13	Hawthorn <i>Crataegus monogyna</i>	3	2n 1e 2s 2w	0.2 est.	0.5	M	Good	Multi stemmed coppice regrowth from ground level. Possibly damaging wall.	Fell	<10	U	-
14	Apple	5	4n 3e 2s 4w	0.18, 0.17 (= 0.24)	1.75	M	Good	Multi stemmed above fork at base with upright open spreading crown. Slightly offset to north east.	Maintain pruning for fruit production.	20-40	C	3.0
15	Apple	5	2n 2e 3s 3w	0.17	2.0	M	Fair	Single stemmed with upright open spreading crown.	Maintain pruning for fruit production.	20-40	C	2.1
16	Apple	5	3n 3e 3s 2w	0.22	1.5	M	Fair	Single stemmed with upright open spreading crown slightly offset to east.	Maintain pruning for fruit production.	20-40	C	2.7
17	Apple	5	3	0.27	1.5	M	Fair	Multi stemmed above fork at 0.5m with wide spreading crown.	Maintain pruning for fruit production.	20-40	C	3.3
18	Apple	4	3n 3e 3s 4w	0.24	1.5	M	Fair	Inclined to south with twin stemmed crown slightly offset to west due to competition and pruning to clear power line.	Maintain pruning for fruit production.	10-20	C	3.0
19	Apple	3	3n 2e 3s 2w	0.07, 0.06 (= 0.09)	1.0	SM	Fair	Twin stemmed from near base with upright open spreading crown.	Maintain pruning for fruit production.	10-20	C	1.2
20	Apple	3	3n 1e 2s 2w	0.17 @base	1.0	M	Fair	Multi stemmed with basal decay.	Fell	<10	U	-
21	Apple	3	2	0.1	1.5	SM	Fair	Single stemmed with upright open spreading crown slight slightly offset to north.	Maintain pruning for fruit production.	10-20	C	1.2



# TREE SURVEY SCHEDULE

**SITE :** Dingleton Hospital Orchard

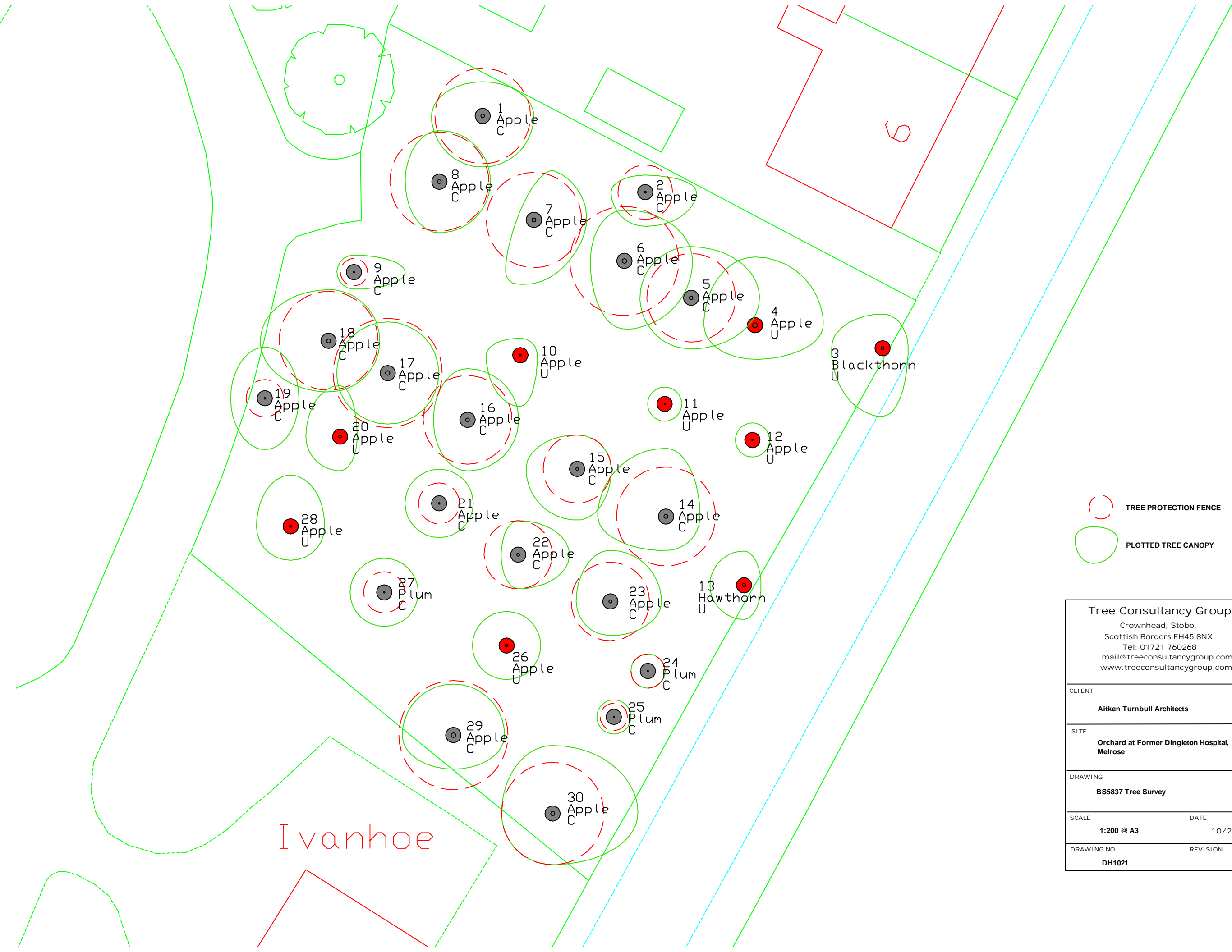
**SURVEY DATE:** October 2021

Tree No.	Species	Height (m)	Crown Radius (m)	Stem Diameter (m)	Height of crown development (m)	Age class	Physiological condition	Comments	Preliminary management recommendations	Estimated remaining contribution (years)	Category	RPA Radius (m)
22	Apple	4	2n 3e 2s 1w	0.17	1.5	M	Fair	Single stemmed with upright open spreading crown. Heavily pruned decay in wound.	Maintain pruning for fruit production.	10-20	C	2.1
23	Apple	4	3n 3e 2s 2w	0.19 @base	1.0	M	Fair	Multi stemmed above fork at 0.5m, slightly offset to north.	Maintain pruning for fruit production.	10-20	C	2.4
24	Plum <i>Prunus domestica</i>	2	1	0.06, 0.05 (= 0.08)	0.5	Y	Good	Young tree with upright open spreading crown.	Maintain pruning for fruit production.	10-20	C	0.9
25	Plum	3	1	0.07 @base	0.5	Y	Good	Young tree with narrow multi stemmed crown.	Maintain pruning for fruit production.	20-40	C	0.9
26	Apple	4	2	0.17	1.5	M	Fair	Partially collapsed.	Fell	<10	U	-
27	Plum	5	2	0.1 @base	1.0	Y	Good	Young tree with narrow columnar form and multiple weak forks, limited future potential.	Maintain pruning for fruit production.	10-20	C	1.2
28	Apple	4	3n 2e 2s 2w	0.11, 0.1 (= 0.14)	1.0	M	Fair	Decay in trunk wound near base limited future potential.	Fell	<10	U	-
29	Apple	6	3n 3e 2s 3w	0.27 @base	1.8	M	Fair	Single stemmed with open spreading crown slightly offset to north.	Maintain pruning for fruit production.	20-40	C	3.3
30	Apple	7	4n 5e 3s 3w	0.16 0.12 0.15 (= 0.25)	1.7	M	Fair	Multi stemmed above fork structure at 1m. Upright open spreading crown. Multi stemmed and heavily pruned.	Maintain pruning for fruit production.	10-20	C	3.0

## **Appendix 2**

### **Tree Survey Plan**

152.4m



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CLIENT	<b>Aitken Turnbull Architects</b>
SITE	<b>Orchard at Former Dingleton Hospital, Melrose</b>
DRAWING	<b>BS5837 Tree Survey</b>
SCALE	DATE
<b>1:200 @ A3</b>	10/2021
DRAWING NO.	REVISION
<b>DH1021</b>	