

1. INTRODUCTION

1.1 PROJECT BRIEF

In April 2017, Saville Jones Architects commissioned Middlemarch Environmental Ltd to undertake an Arboricultural Survey of trees growing on land at, and adjacent to, Dalloway Road, Arundel in West Sussex.

It is understood that the proposed development of the site is the construction of new residential dwelling houses.

The purpose of this report is to:

- Record the current condition of the trees found on the site and categorise them using criteria outlined in BS5837:2012 "Trees in relation to design, demolition and construction - Recommendations".
- Provide a Tree Constraints Plan that identifies any constraints to development presented by the trees to include root protection areas for the retained trees as described in BS5837:2012.
- Provide guidance detailing arboricultural constraints to development and factors to be considered during the detailed design of the proposed development.

Middlemarch Environmental Ltd has also been commissioned to undertake a Preliminary Ecological Appraisal and an Arboricultural Impact Assessment for Saville Jones Architects at this site. The findings of these surveys are detailed in Report Number RT-MME-124814-01 and RT-MME-124814-03, respectively.

1.2 SITE DESCRIPTION

The site under consideration, hereinafter referred to as the study area, is a roughly rectangular shaped parcel of land, approximately 0.7 ha in size, which is located adjacent to Dalloway Road in Arundel, West Sussex at Ordnance Survey Grid Reference TQ 0038 0641.

The study area is located within a rural residential area on the south-western fringes of Arundel, a village in the Arun District of West Sussex. To the north the surrounding area is dominated by a large woodland area, Tortington Common, whilst to the south agricultural fields dominate the wider landscape.

To the north the study area abuts residential properties off Birch Close, whilst to the east Dalloway Road separates the study area from further residential properties and Stewards Copse. To the south the study area abuts a pasture field and the Tortington Common to the west.

The study area is dominated by semi-natural broadleaved woodland, with a hardstanding footpath running through the centre. 

The topography of the study area is varied with a general slope down to its south-eastern corner evident.

A total of seventy individual trees within an area of woodland were recorded during the survey. The location of the trees surveyed can be found on Middlemarch Environmental Ltd Drawing Number C124814-02-01, contained within Section 7 of this report.

2. METHODOLOGY

2.1 DESK STUDY

A desk study was undertaken to identify if any of the trees present within or in close proximity to the site are covered by Tree Preservation Orders (TPOs) or if the site is situated within a Conservation Area. This involved consultation with the Local Planning Authority.

2.2 CONDITION STATUS

To determine the status of the trees within the site a full arboricultural survey has been undertaken, assessing the species and status of all trees present. This survey has been carried out in accordance with British Standard 5837:2012 'Trees in relation to design, demolition and construction – Recommendations'.

All trees have been assigned a unique reference number. Individual trees above 75 mm in diameter (at 1.5 m above ground level) have had their position plotted to a survey drawing. The trees were visually assessed and a schedule prepared listing: tree number, species, trunk diameter at 1.5 m above ground level (or in accordance with Annex C of BS5837:2012), tree height, crown spread (cardinal points), crown clearance (cardinal points), height of first branch and growth direction, age class and estimated remaining life expectancy in years. Measurements for tree height, first branch height, crown clearance and crown spread were taken to an accuracy of 0.5 m. Stem diameter measurements were recorded to the nearest 10 mm. Any specific observations or recommendations with regard to management were also noted. All these observations and measurements are summarised in Section 3.3.

Each tree was assessed and assigned to one of the following categories:

- **Category A:** Those trees of high quality and value with an estimated remaining life expectancy of at least 40 years.
- **Category B:** Those trees of moderate quality and value with an estimated remaining life expectancy of at least 20 years.
- **Category C:** Those trees of low quality and value with an estimated remaining life expectancy of at least 10 years or young trees with a stem diameter below 150 mm.
- **Category U:** Trees in such a condition that they cannot realistically be retained as living trees in the context of the current land use for longer than 10 years.

Categories A, B and C have further sub-categories with regards to the reasons for tree retention:

- 1: Mainly arboricultural qualities.
- 2: Mainly landscape qualities.
- 3: Mainly cultural values, including conservation.

2.3 ROOT PROTECTION AREA (RPA)

In order to avoid damage to the roots or rooting environment of retained trees, the RPA has been calculated for each of the Category A, B and C trees. This is a minimum area around a tree which is deemed to contain sufficient roots and rooting volume to maintain the tree's viability. Protection of the roots and soil structure in this area should be treated as a priority.

These figures have been calculated utilising the formulas within Section 4.6 and Annex D of British Standard 5837:2012.

Tree No.	Species	No. Stems	Diam (mm)	H't (m)	H't 1st Branch (m)	Branch Spread (m)				Crown Clearance (m)				Age	Phys Cond	Struc Cond	Est. Remain Contrib (Years)	Cat	Comments	Preliminary Management Recommendations
						N	E	S	W	N	E	S	W							
67	Ash	3	530	14.0	3.5 E	6.5	7.0	6.0	5.0	3.0	3.0	4.0	5.0	EM	F	F	10+	C1	- Trifurcate at ground level. - Crossing branches. - Ivy suppresses the main stem. - Dieback present on lateral branches. - Minor deadwood present.	-
68	Ash	1	620	14.0	4.0 W	6.0	6.0	6.0	6.0	4.0	4.0	4.0	4.0	EM	G	F	10+	C1	- Woodpecker holes present. - Tear wounds present. <i>Inonotus hispidus</i> fungi present. - Ivy present on main stem.	-
69	English oak	1	770	21.0	3.5 S	7.0	8.0	8.0	8.0	4.5	4.5	4.5	4.5	EM	G	G	40+	A1	- Birds nest present. - Minor deadwood present. - Ivy present on main stem. - Burrs present on main stem. - Tear wounds present.	-
70	Ash	1	560	19.0	3.0 NE	7.0	6.0	6.0	6.0	3.0	3.0	3.0	3.0	EM	F	F	10+	C1	- Ivy present on main stem. - Minor deadwood present. - Dieback present on lateral branches. - Crown overhanging residential garden. - Signs of <i>Inonotus hispidus</i> on the main stem.	-

Table 3.3 (cont'd): Results of Arboricultural Survey (continues)

Tree No.	Species	No. Stems	Diam (mm)	H't (m)	H't 1st Branch (m)	Branch Spread (m)								Age	Phys Cond	Struc Cond	Est. Remain Contrib (Years)	Cat	Comments	Preliminary Management Recommendations
						N	E	S	W	N	E	S	W							
59	Hazel	1	220	9.0	3.0 NE	3.0	3.0	2.0	3.0	3.0	3.0	3.0	3.0	Y	G	F	10+	C1	- Large quantity of deadwood present. - Suppressed form.	-
60	Sweet chestnut	2	490	12.0	-	6.0	5.0	2.0	3.0	3.0	3.0	3.0	3.0	EM	G	F	10+	C1	- Tree is leaning south. - Large quantity of deadwood present. - Suppressed form.	-
61	Hazel	2	270	8.0	-	7.0	5.0	1.0	1.0	2.0	2.0	2.0	2.0	Y	F	F	10+	C1	- Tree is an old coppice. - Tree is leaning north. - Tree offers a limited contribution to the site.	-
62	Silver birch	11	360	11.0	3.0 W	4.0	4.0	4.0	4.0	3.5	3.5	3.5	3.5	Y	G	G	20+	B1	Ivy present on main stem.	-
63	English oak	1	530	14.0	4.0 S	1.5	4.0	5.0	4.0	5.0	5.0	5.0	5.0	Y	G	G	20+	B1	- Ivy present on main stem. - Previous work – crown has been cutback to residential boundary, not occluding. - Minor deadwood present.	-
64	Sweet chestnut	1	360	11.0	3.5 S	3.0	6.0	2.0	0.5	4.0	4.0	4.0	4.0	Y	F	P	<10	U	Tree has failed.	Remove tree.
65	Beech	1	340	13.0	2.5N	5.0	5.0	5.0	4.0	2.5	2.5	2.5	2.5	Y	G	G	20+	B1	- Previous work – crown has been cutback to residential boundary, not occluding due to poor pruning techniques utilised. - Ivy present on main stem. - T64 hung up in crown.	-
66	Ash	1	320	11.0	-	6.0	2.0	0.5	2.0	5.0	5.0	5.0	5.0	Y	F	F	10+	C1	- Ivy suppresses main stem. - Tree is leaning north. - Limited contribution.	-

Table 3.3 (cont'd): Results of Arboricultural Survey (continues)