

**DALLOWAY ROAD, ARUNDEL,
WEST SUSSEX**

**PRE-DEVELOPMENT
ARBORICULTURAL SURVEY**

A Report to: Saville Jones Architects

Report No: RT-MME-124814-02

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REPORT VERIFICATION

This study has been undertaken in accordance with British Standard 5837:2012 "Trees in relation to design, demolition and construction - Recommendations".

Report Version	Date	Completed by:	Checked by:	Approved by:
Final	02/05/2017	Dean Moore (Arboricultural Consultant)	Ed Lusk HND, PTI (Principal Arboricultural Consultant)	Dr Philip Fermor CEnv, MCIEEM (Managing Director)

DISCLAIMER

The contents of this report are the responsibility of Middlemarch Environmental Ltd. It should be noted that, whilst every effort is made to meet the client's brief, no site investigation can ensure complete assessment or prediction of the natural environment.

Middlemarch Environmental Ltd accepts no responsibility or liability for any use that is made of this document other than by the client for the purposes for which it was originally commissioned and prepared.

VALIDITY OF DATA

The findings of this study are valid for a period of 12 months from the date of survey. If works have not commenced by this date, an updated site visit should be carried out by a suitably qualified and experienced arboriculturist to assess any changes to the trees, groups and hedgerows on site and to inform a review of the conclusions and recommendations made.

It should be noted that trees are dynamic living organisms that are subject to natural changes as they age or are influenced by changes in their environment. As such following any significant meteorological event or changes in the growing environment of the trees they should be re-assessed by a suitably qualified and experienced arboriculturist.

NON-TECHNICAL SUMMARY

Middlemarch Environmental Ltd was commissioned to undertake a pre-development arboricultural survey of a site at Dalloway Road, Arundel in West Sussex. It is understood that the site will be the subject of a planning application for residential development. To fulfil the project brief a desk study and a field survey of the trees present on site were undertaken in April 2017.

The desk study exercise identified that none of the trees present within the study area are protected by a Tree Preservation Order. Additionally this exercise established that the study area is not situated within a Conservation Area.

Dean Moore (Arboricultural Consultant) undertook the field survey in April 2017. The survey identified that the site contains a number of young, early-mature and mature trees which are predominately in a good condition.

The most significant trees recorded during the survey included a number of individual English Oak (*Quercus robur*), Field Maple (*Acer campestre*) and Scots Pine (*Pinus sylvestris*), as well as the mixed species woodland which dominates the study area. These specimens are visually prominent and generally considered to have a moderate to high retention value.

Other trees, including Ash (*Fraxinus excelsior*), Beech (*Fagus sylvatica*), Flowering Cherry (*Prunus* sp.), Hazel (*Corylus avellana*) and Sweet Chestnut (*Castanea sativa*), were deemed less significant in the local landscape. Several of these specimens exhibited structural defects such as branch dieback, cavities, deadwood, sparse crowns, stem wounds, suppressed forms and other general signs of decline. These defects have limited the likely future potential of the trees and as such they were typically considered to be of a low retention value.

To ensure the protection of trees selected for retention during the course of the proposed development it is recommended that the guidance set out in Section 5 of this report is considered and that, during development of the site, the retained trees are protected by the erection of tree protection barriers to the specification set out in BS5837:2012.

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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.

3. RESULTS

3.1 DESK STUDY

An internet search using the online mapping provided by Arun District Council (<http://www1.arun.gov.uk/webapps/WebMapLayers/>) confirms that there are no trees within the study area subject to Tree Preservation Orders and that the study area is not situated within a Conservation Area.

However it was noted that the study area comprises an area of ancient woodland. As such, the Local Planning Authority ecologist and / or the local Wildlife Trust should be consulted prior to any works commencing to determine how works may proceed without adversely impacting this site.

3.2 WEATHER CONDITIONS AND PERSONNEL

Dean Moore (Arboricultural Consultant) completed the survey on 19th April 2017. The weather conditions at the time of the survey are shown in Table 3.1.

Conditions	Result
Temperature (°C)	4
Cloud Cover (%)	20
Precipitation	Nil
Wind Speed (Beaufort)	F1

Table 3.1: Weather Conditions at Time of Survey

3.3 SURVEY RESULTS

Tree species recorded during the survey are listed in Table 3.2.

Common Name	Scientific Name
Ash	<i>Fraxinus excelsior</i>
Beech	<i>Fagus sylvatica</i>
Blackthorn	<i>Prunus spinosa</i>
Butchers broom	<i>Ruscus aculeatus</i>
Common lime	<i>Tilia x europaea</i>
Elder	<i>Sambucus nigra</i>
English oak	<i>Quercus robur</i>
English yew	<i>Taxus baccata</i>
Field maple	<i>Acer campestre</i>
Flowering cherry	<i>Prunus</i> sp.
Goat willow	<i>Salix caprea</i>
Hawthorn	<i>Crataegus monogyna</i>
Hazel	<i>Corylus avellana</i>
Holly	<i>Ilex aquifolium</i>
Purple leaved plum	<i>Prunus cerasifera</i> var <i>nigra</i>
Scots pine	<i>Pinus sylvestris</i>
Silver birch	<i>Betula pendula</i>
Sweet chestnut	<i>Castanea sativa</i>
Sycamore	<i>Acer pseudoplatanus</i>

Table 3.2: Tree Species Recorded During Survey

The full results of the Arboricultural Assessment are detailed in Table 3.3.

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							
1	Scots pine	1	360	10.0	4.0 W	3.0	3.0	2.5	2.5	3.0	3.0	3.0	3.0	Y	G	G	20+	B1	Young tree in good health.	-
2	English oak	1	620	15.0	2.0 E	9.0	10.5	3.0	5.5	2.5	2.5	2.5	2.5	EM	G	F	10+	C1	- Tree leaning east, root plate lifting. - Hardstanding present within the RPA. - Previous work – crown lift.	Tree needs to be monitored.
3	Sycamore	1	280	13.0	3.0 S	3.0	2.0	3.0	4.0	3.5	3.5	3.5	3.5	Y	F	F	10+	C1	- Ivy present on main stem and crown. - Limited inspection due to ivy. - Hardstanding present within the RPA. - Dieback on lateral branches.	-
4	Field maple	1	310	10.0	1.5 N	4.0	3.5	3.0	3.0	1.5	1.5	1.5	1.5	Y	G	G	20+	B1	- Bifurcate at 1.5 m above ground level. - Crossing branches.	-
5	Scots pine	1	310	12.0	4.0 NW	3.5	3.0	2.5	3.0	2.5	3.5	3.5	3.5	Y	G	G	20+	B1	- Previous work – crown lift, wounds occluding. - Minor deadwood.	-
6	Purple leaved plum	1	290	8.0	2.0 N	5.0	5.5	1.5	4.0	1.5	2.0	3.0	3.0	Y	F	F	10+	C1	- Bifurcate at 2.0 m above ground level, union included. - Generally a poor specimen.	-
7	English oak	1	950	22.0	5.0 E	9.0	10.0	9.0	10.0	5.0	5.0	5.0	5.0	EM	G	G	40+	A1 Int	- Ivy present on main stem and crown. - Limited inspection due to ivy. - Hardstanding present within the RPA. - Minor and major deadwood present. - Minor cavities present I crown.	Sever ivy.

Table 3.3: Results of Arboricultural Survey (continues)

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							
8	Scots pine	1	440	8.0	3.0 NE	5.0	5.0	2.0	2.0	3.0	3.0	3.0	3.0	Y	P	P	<10	U	- Tree is in heavy decline. - Ivy present on main stem and crown. - Limited contribution	Remove tree.
9	Ash	1	640	19.0	3.0 E	5.5	6.0	5.0	5.0	2.5	3.0	3.0	3.0	EM	F	F	10+	C1	- Hardstanding present within the RPA. - Ivy present on main stem and crown. - Limited inspection due to ivy. - Tree is showing signs of decline. - Dieback present on lateral branches. - Minor deadwood present.	-
10	English oak	1	900	20.0	3.0 S	5.0	8.0	9.0	4.5	3.0	3.0	0.0	4.0	M	G	G	40+	A1 Int	- Ivy present on main stem and crown. - Limited inspection due to ivy. - Minor deadwood present.	Sever ivy.
11	English oak	1	700	12.0	5.0 NW	5.0	5.0	4.0	4.0	4.0	4.0	4.0	4.0	EM	D	D	<10	U	Dead tree.	Remove tree.
12	Field maple	1	310	8.0	2.0 W	5.0	5.0	3.0	5.0	1.0	1.0	1.0	1.0	Y	F	F	10+	C1	- Suppressed form. - Ivy present on main stem and crown. - Limited inspection due to ivy. - Minor deadwood present. - Dieback present on lateral branches.	-

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)				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							
13	English oak	1	740	15.0	3.0 SW	6.0	7.0	7.0	6.0	2.5	3.0	3.0	3.0	EM	G	G	20+	B1	- Ivy present on main stem and crown. - Limited inspection due to ivy. - Tear wounds present, wounds occluding. - Minor cavities present. - Minor and major deadwood present.	-
14	English oak	1	710	16.0	3.5 SE	7.0	5.0	10.0	4.0	3.0	3.0	3.0	3.0	EM	G	G	20+	B1	- Ivy present on main stem and crown. - Limited inspection due to ivy. - Minor and major deadwood present.	-
15	Ash	1	500	16.0	6.0 S	6.0	2.5	7.0	7.0	5.0	5.0	5.0	5.0	EM	F	F	10+	C1	- Minor and major deadwood present. - Dieback present on lateral and apical branches.	-
16	Flowering cherry	1	320	11.0	3.0 S	2.0	2.0	5.0	2.0	3.0	3.0	3.0	3.0	Y	F	F	10+	C1	- Suppressed form. - Generally a poor specimen.	-
17	English oak	1	810	19.0	4.0 S	6.5	6.5	6.5	6.5	5.0	5.0	5.0	5.0	EM	F	G	20+	B1	- Dieback present on apical and lateral branches. - Minor and major deadwood present. - Ivy present on main stem. - Showing signs of decline.	-

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)				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							
18	Ash	2	680	18.0	4.0 S	2.5	5.0	9.0	5.0	5.0	4.0	3.0	3.0	EM	F	F	10+	C1	• Bifurcate at ground level. • Suppressed form. • Ivy present on main stem. • Minor deadwood present. • Minor cavities present in crown.	-
19	English oak	1	670	16.0	2.5 S	5.0	4.0	6.0	6.0	3.0	3.0	3.0	3.0	EM	F	G	20+	B1,3	• Epicormic growth present on main stem. • Sparse crown. • Minor deadwood present. • Dieback present on lateral and apical branches. • Minor cavities present on main stem.	-
20	English oak	1	980	21.0	3.0 NE	9.5	9.5	9.5	9.5	5.0	5.0	5.0	5.0	M	G	F	40+	A1 Int	• Tree is a good specimen. • Wound present 0.0 – 1.0 m above ground level, approximately 450 mm wide, decay present wound occluding. • Minor deadwood present.	Decay detection required at location of wound.
21	Beech	1	200	8.0	2.0 N	4.0	2.5	4.5	4.5	1.0	1.0	1.0	1.0	Y	G	F	10+	C1	• Suppressed form. • Limited contribution. • Minor deadwood present.	-
22	Beech	1	280	9.0	3.0 W	7.0	3.0	3.0	5.0	3.0	3.0	3.0	3.0	Y	G	F	10+	C1	• Tree is leaning north. • Limited contribution. • Suppressed form. • Exposed roots.	-

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)				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							
23	English oak	1	600	18.0	4.0 SE	8.0	7.0	4.0	7.0	5.0	5.0	5.0	5.0	EM	G	G	10+	C1	- Minor deadwood present. - Storm damage present. - Ivy present on main stem.	-
24	English oak	1	530	10.0	4.0 S	1.0	3.0	8.0	3.0	4.0	4.0	4.0	4.0	Y	F	F	10+	C1	- Minor deadwood present. - Main leader has been removed. - Suppressed form. - Storm damage present. - Ivy present on main stem.	-
25	Ash	1	460	8.0	-	1.0	10.0	1.0	1.0	4.0	4.0	4.0	4.0	Y	P	P	<10	U	Tree has failed	Remove tree.
26	English oak	1	1040	21.0	5.0 NW	11.0	10.0	8.0	10.0	4.5	4.5	4.5	4.5	M	G	G	40+	A1	- Tree is a good specimen. - Ivy present on main stem. - Minor and major deadwood present.	-
27	Beech	1	240	10.0	2.5 S	5.0	5.0	5.0	4.0	3.0	3.0	3.0	3.0	Y	F	F	10+	C1	- Ivy present on main stem. - Suppressed form. - Minor deadwood present.	-
28	English oak	1	720	10.0	4.0 S	4.5	5.0	7.0	5.0	4.0	4.0	4.0	4.0	EM	F	F	20+	B1	- Woodpecker holes present. - Minor and major deadwood present. - Ivy present on main stem. - Tree is showing signs of decline.	-

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)				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							
29	English oak	1	640	13.0	2.5 S	6.0	5.0	7.0	5.0	5.0	5.0	2.0	5.0	Y	G	G	20+	B1	- Minor deadwood present. - Tree is in good health. - Dieback present on lateral branches.	-
30	English oak	1	970	21.0	3.5 SW	8.0	8.5	10.0	7.0	5.0	5.0	2.5	5.0	M	G	G	40+	A1	- Minor deadwood present. - Tree is a good specimen.	-
31	English oak	1	750	20.0	4.0 NE	9.5	9.5	8.0	8.5	4.0	4.0	4.0	4.0	EM	G	G	40+	A1	- Minor deadwood present. - Tree is a good specimen. - Dieback present on lateral branches.	-
32	English oak	1	740	19.0	3.5 W	6.5	6.5	6.5	4.5	4.5	4.5	4.5	4.5	EM	F	G	20+	B1	- Bifurcate at 3.5 m above ground level. - Sparse crown. - Burrs present on main stem.	-
33	English oak	1	730	19.0	4.0 N	6.0	5.0	6.0	6.0	4.5	4.5	4.5	4.5	EM	G	G	20+	B1	- Minor deadwood present. - Tear wounds present. - Minor cavities present in the crown.	-
34	English oak	1	720	19.0	4.5 S	5.0	4.0	6.0	6.0	5.0	5.0	5.0	5.0	EM	G	G	20+	B1	- Ivy present on main stem. - Minor deadwood present. - Minor cavities present in the crown.	-
35	Sweet chestnut	1	410	7.0	-	0.5	1.0	5.0	1.5	3.0	3.0	3.0	3.0	Y	F	F	10+	C1	- Suppressed form. - Minor deadwood present. - Generally a poor specimen.	-

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)				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							
36	English oak	1	650	15.0	3.0 S	3.0	5.0	8.0	4.0	4.0	4.0	2.5	4.0	Y	F	G	20+	B1	- Suppressed form. - Ivy present on main stem. - Minor deadwood present. - Epicormic growth present on main stem.	-
37	English oak	1	690	17.0	4.0 NW	8.0	6.5	7.0	7.5	4.5	4.5	4.5	4.5	EM	G	G	20+	B1	- Tear wounds present. - Minor and major deadwood present. - Minor cavities present in crown. - Epicormic growth present on main stem.	-
38	English oak	1	860	21.0	3.5 W	9.0	9.0	9.0	9.0	4.0	4.0	4.0	4.0	EM	G	G	40+	A1	- Tree is a good specimen. - Minor and major deadwood present. - Storm damage present.	-
39	English oak	1	340	8.0	-	2.0	1.0	5.0	1.5	3.0	3.0	3.0	3.0	Y	D	D	<10	U	Dead tree.	Remove tree.
40	English oak	1	760	19.0	2.0 S	8.0	6.0	9.0	7.0	3.0	3.0	0.5	3.0	EM	G	G	40+	A1	- Tree is a good specimen. - Minor deadwood present.	-
41	Goat willow	2	390	11.0	3.5 E	4.0	4.0	4.0	5.0	4.0	4.0	4.0	4.0	Y	G	F	10+	C1	- Bifurcate at ground level. - Ivy present on main stem. - Minor deadwood present. - Crossing branches.	-
42	Flowering cherry	1	300	10.0	4.0 SW	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	Y	F	F	10+	C1	- Ivy present on main stem. - Minor deadwood present. - Crossing branches.	-

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)				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							
43	Ash	4	580	11.0	3.5 NW	5.0	5.0	5.0	3.5	5.0	5.0	5.0	5.0	EM	F	F	10+	C1	• Woodpecker holes present. • Ivy present on main stem. • Tree is in decline. • Trifurcate at 0.5 m above ground level.	-
44	Silver birch	1	340	9.0	3.5 SE	4.0	4.0	4.0	4.0	3.0	3.0	3.0	3.0	Y	F	F	10+	C1	• Ivy present on main stem and crown. • Limited inspection due to ivy.	-
45	English oak	1	840	20.0	4.5 NE	10.0	9.0	10.0	10.0	5.0	5.0	5.0	5.0	M	G	G	40+	A1	• Tree is a good specimen. • Minor deadwood present. • Tear wounds present.	-
46	English oak	1	620	18.0	4.0 S	7.0	7.0	6.0	5.5	4.0	4.0	4.0	4.0	Y	G	G	20+	B1	• Minor deadwood present. • Epicormic growth present on main stem.	-
47	Sweet chestnut	3	570	14.0	-	3.0	2.5	5.0	5.0	4.0	4.0	4.0	4.0	EM	F	F	10+	C1	• Trifurcate at 0.5 m above ground level. • Sparse crown. • Ivy present on main stem. • Bird box present on main stem. • Sparse crown.	-
48	Sweet chestnut	1	320	15.0	3.5 S	5.0	5.0	5.0	4.0	4.0	4.0	4.0	4.0	Y	F	F	10+	C1	• Sparse crown. • Ivy present on main stem. • Generally a poor specimen.	-
49	Sweet chestnut	1	460	11.0	3.0 E	2.0	3.0	3.0	3.0	4.0	4.0	4.0	4.0	Y	D	D	<10	U	• Dead tree. • Wood pecker holes present.	-

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)				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							
50	Sweet chestnut	1	430	12.0	3.5 SW	2.0	3.0	3.0	3.0	3.5	3.5	3.5	3.5	Y	F	F	10+	C1	• Previous work – crown has been cutback to residential boundary. • Ivy present on main stem.	-
51	Sweet chestnut	12	450	12.0	4.0 S	2.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	Y	F	F	10+	C1	• Previous work – crown has been cutback to residential boundary. • Ivy present on main stem. • Bifurcate at ground level.	-
52	English oak	1	580	16.0	3.5 NW	8.0	6.0	7.0	8.0	4.0	4.0	4.0	4.0	Y	G	G	20+	B1	• Minor deadwood present.	-
53	Sweet chestnut	1	480	15.0	3.0 E	5.0	6.0	6.0	4.0	3.0	3.0	3.0	3.0	Y	F	G	10+	C1	• Large quantity of deadwood present. • Tree is showing signs of decline.	-
54	English oak	1	850	19.0	4.0 NE	9.5	9.5	9.5	9.5	3.0	3.0	3.0	3.0	M	G	G	40+	A1	• Tree is a good specimen. • Minor deadwood present.	-
55	Holly	2	270	10.0	0.5 N	3.5	3.5	3.5	3.5	0.0	0.0	0.0	0.0	Y	F	F	10+	C1	• Bifurcate at 0.5 m above ground level. • Crossing branches. • Suppressed form.	-
56	Sweet chestnut	2	380	12.0	-	2.5	1.0	3.0	4.0	4.0	4.0	4.0	4.0	Y	F	F	10+	C1	• Bifurcate at ground level.	-
57	Silver birch	1	220	6.5	-	1.0	1.0	1.0	1.0	-	-	-	-	Y	D	D	<10	U	• Dead tree.	-
58	Sweet chestnut	2	400	11.0	-	6.0	5.0	3.0	1.5	3.5	3.5	3.5	3.5	EM	F	F	10+	C1	• Bifurcate at ground level. • Large quantity of deadwood present. • Tree is showing signs of decline. • Dieback on lateral branches.	-

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)				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							
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)

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)				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							
W1	English yew, Hawthorn, Common lime, Silver birch, Sweet chestnut, Blackthorn, English oak, Goat willow, Holly, Elder, Butchers broom, Ash, Sycamore	1	40 - 300	1.5 - 17.0	0.0 N	3.0	3.0	3.0	3.0	0.0	0.0	0.0	0.0	Y, EM	G	G	40+	B1,2 ,3	- Dead and dying trees present. - A number of trees have failed.	-
Key <u>Age Class</u> Y: Young = tree within first third of average life expectancy EM: Early mature = tree within second third of average life expectancy M: Mature = tree within final third of average life expectancy OM: Over mature = tree beyond average life expectancy <u>Physiological Condition</u> G: Good = no health problems F: Fair = symptoms of ill health that may be remedied P: Poor = poor health <u>Structural Condition</u> G: Good = no structural defects F: Fair = remedial structural defects P: Poor = significant structural defects 000: Estimated dimension due to access restrictions RPA: Root Protection Area																				

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

3.4 ROOT PROTECTION AREA (RPA)

Table 3.4 provides details of the Root Protection Area (RPA) of all trees and woodlands surveyed which were classified as Category A, B or C specimens. This table also gives an approximate root protection radius for these trees.

Tree No.	Species	Diameter (mm)	Approximate Root Protection Radius (m)	Root Protection Area (m ²)
1	Scots pine	360	4.5	64
2	English oak	620	7.5	177
3	Sycamore	280	3.6	41
4	Field maple	310	3.9	48
5	Scots pine	310	3.9	48
6	Purple leaved plum	290	3.6	41
7	English oak	950	11.4	408
9	Ash	640	7.8	191
10	English oak	900	10.8	366
12	Field maple	310	3.9	48
13	English oak	740	9.0	255
14	English oak	710	8.7	238
15	Ash	500	6.0	113
16	Flowering cherry	320	3.9	48
17	English oak	810	9.9	308
18	Ash	680	8.4	222
19	English oak	670	8.1	206
20	English oak	980	12.0	452
21	Beech	200	2.4	18
22	Beech	280	3.6	41
23	English oak	600	7.2	163
24	English oak	530	6.6	137
26	English oak	1040	12.6	499
27	Beech	240	3.0	28
28	English oak	720	8.7	238
29	English oak	640	7.8	191
30	English oak	970	11.7	430
31	English oak	750	9.0	255
32	English oak	740	9.0	255
33	English oak	730	9.0	255
34	English oak	720	8.7	238
35	Sweet chestnut	410	5.1	81
36	English oak	650	7.8	191
37	English oak	690	8.4	222

Table 3.4: RPA and Approximate Root Protection Radius of Category A, B and C Trees and Woodland Surveyed (continues)

Tree No.	Species	Diameter (mm)	Approximate Root Protection Radius (m)	Root Protection Area (m ²)
38	English oak	860	10.5	346
40	English oak	760	9.3	272
41	Goat willow	390	4.8	72
42	Flowering cherry	300	3.6	41
43	Ash	580	7.2	163
44	Silver birch	340	4.2	55
45	English oak	840	10.2	327
46	English oak	620	7.5	177
47	Sweet chestnut	570	6.9	150
48	Sweet chestnut	320	3.9	48
50	Sweet chestnut	430	5.4	92
51	Sweet chestnut	450	5.4	92
52	English oak	580	7.2	163
53	Sweet chestnut	480	6.0	113
54	English oak	850	10.2	327
55	Holly	270	3.3	34
56	Sweet chestnut	380	4.8	72
58	Sweet chestnut	400	4.8	72
59	Hazel	220	2.7	23
60	Sweet chestnut	490	6.0	113
61	Hazel	270	3.3	34
62	Silver birch	360	4.5	64
63	English oak	530	6.6	137
65	Beech	340	4.2	55
66	Ash	320	3.9	48
67	Ash	530	6.6	137
68	Ash	620	7.5	177
69	English oak	770	9.3	272
70	Ash	560	6.9	150
W1	Mixed species	40 - 300	6.9*	41*
Key: *: Around centre of each tree within group. <u>000</u> : Estimated dimension.				

Table 3.4 (cont'd): RPA and Approximate Root Protection Radius of Category A, B and C Trees and Woodland Surveyed

4. DISCUSSION

4.1 DESK STUDY

The desk study identified that no trees within the study area are subject to Tree Preservation Orders (TPO), and that the study area is not situated within a Conservation Area.

However it was noted that the study area comprises an area of ancient woodland. While not an arboricultural constraint, this designation does provide a degree of non-statutory ecological protection to the area. As such, the Local Planning Authority ecologist and / or the local Wildlife Trust should be consulted prior to any works commencing to determine how works may proceed without adversely impacting this site.

4.2 TREE QUALITY

Retention Value

The initial stage of a tree survey in accordance to BS5837:2012 looks at the trees on the site in terms of life expectancy and condition. Trees are then categorised according to their retention value.

Category A trees are those that have been assessed as being of a high quality and value; significant amendments to the proposed scheme should be considered in preference to their removal. These trees are shown in Green on the Tree Constraints Plan.

Category B trees are those that have been assessed as being of a moderate quality and value; amendments to the proposed scheme should be considered in preference to their removal. These trees are shown in Blue on the Tree Constraints Plan.

Category C trees are those that have been assessed as being of a low quality and value; the loss of these specimens should not necessarily be considered as a constraint to development. These trees are shown in Grey on the Tree Constraints Plan

Category U trees are those that have been assessed as having no retention value; these trees should not be a material consideration in the planning process. These trees are shown in Red on the Tree Constraints Plan.

Category A, B or C trees are those that should be a material consideration in the planning process whilst Category U trees are those which would be lost in the short term for reasons connected to their physiological or structural condition and hence they should not be a consideration in the planning process.

Overall seventy trees and one woodland have been inspected in accordance with BS5837:2012 'Trees in relation to design, demolition and construction – Recommendations'.

A summary of the trees and woodlands in each of the four categories is given in Table 4.1.

BS5837:2012 Category	Tree Number
A	7, 10, 20, 26, 30, 31, 38, 40, 45, 54, 69.
B	1, 4, 5, 13, 14, 17, 19, 28, 29, 32, 33, 34, 36, 37, 46, 52, 62, 63, 65, W1.
C	2, 3, 6, 9, 12, 15, 16, 18, 21, 22, 23, 24, 27, 35, 41, 42, 43, 44, 47, 48, 50, 51, 53, 55, 56, 58, 59, 60, 61, 66, 67, 68, 70.
U	8, 11, 25, 39, 49, 57, 64.

Table 4.1: Summary of Trees and Woodlands in BS5837:2012 Categories

Physiological Condition

Trees considered to be in a good physiological condition are those with crown density and shoot extension growth levels within the expected ranges for their age and species. Generally these trees, subject to being of a suitable structural condition, can be expected to make a lasting contribution to the site. Additionally trees

within the good condition class are likely to tolerate changes within their growing environment that occur as a result of development; as such their successful retention will be easier to achieve.

Trees considered to be in a fair physiological condition are those specimens exhibiting lower shoot extension growth and reduced crown density than would typically be expected. These specimens have a lower life expectancy than those within the good condition class and will not tolerate significant changes as a result of development as well as those in the good condition class.

Trees considered to be in a poor physiological condition are those exhibiting crown and shoot dieback and significantly reduced crown density. Trees of a poor physiological condition are not likely to make a lasting contribution to the site and whilst their retention in the short term may be beneficial such retention will only be achievable if the trees are fully protected throughout development as they will not tolerate changes in their growing environment.

Chart 4.1 summarises the distribution of tree physiological condition across the study area.

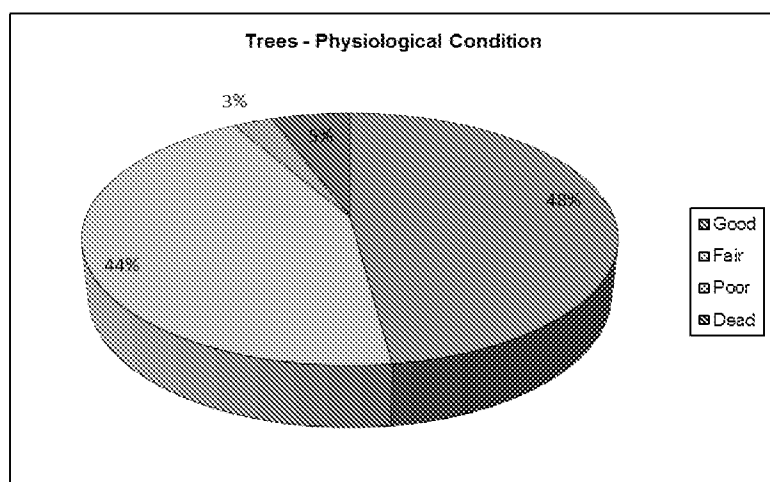


Chart 4.1: Tree Physiological Condition

Age Distribution

Those trees assessed as being young (Y) in age can generally be considered to have significant growth potential. Whilst these specimens are not likely to make a substantial contribution to the landscape character of the site at present they will, if retained, provide succession for the eventual removal of mature or over-mature trees as a result of declining physiological or structural condition.

Early mature trees (EM) will generally make a significant contribution to the landscape character and appearance of the site and their retention will provide more immediate succession. These trees will also have significant growth potential.

Mature trees (M) are not considered to have significant future growth potential and have generally reached their maximum expected size for the location. These trees will generally make the highest contribution to the landscape contribution of the site however a tree stock over dominated by mature trees will require careful management to ensure that continuation of canopy cover can be achieved.

Over-mature trees (OM) do not have the potential to increase in size and may in fact reduce in size as their crowns begin to break up. These trees will often make a significant contribution to the landscape character of the site and are likely to have ecological value. However the retention of these trees within new development must be carefully planned as they are approaching the end of their useful life expectancy and they will often have structural defects. Where over-mature trees are to be retained in new development it is essential that access is available for their eventual removal.

Veteran trees (V) are those that show features of biological, cultural or aesthetic value that are characteristic of an individual surviving beyond the typical age range for the species. These trees have negligible potential to increase in size. Veteran trees are usually of a high ecological value and they will require sensitive

management where they are to be retained in new development. As such it is again essential that they are located in areas where access is available to undertake management operations and where there is a reduced risk of harm occurring from failure of the trees.

Chart 4.2 shows the distribution of the age class of trees within the study area.

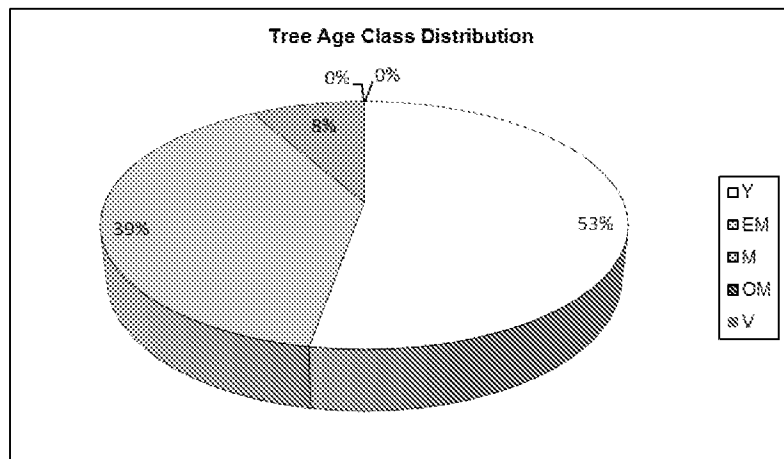


Chart 4.2: Tree Age Class Distribution

Visual Amenity

The study area is dominated by a woodland which is a prominent feature of the local landscape and considered to have a high visual amenity value.

Ecological Value

Generally speaking it is known that trees are of ecological value and that they fulfil an important role in the urban landscape. In particular it should be noted that trees may provide habitat for protected species, notably for birds and bats. In this respect a number of woodpecker holes were noted on the main stems of three individual trees within the study area, respectively an English Oak (tree number 28), an Ash (tree number 43) and a Sweet Chestnut (tree number 49). Full details of the ecological value of trees within the study area can be found within the Preliminary Ecological Appraisal of this site (Report Number RT-MME-124814-01).

5. ARBORICULTURAL DESIGN GUIDANCE

5.1 THE TREE CONSTRAINTS PLAN

The Tree Constraints Plan (Drawing Number C124814-02-01, contained within Section 7 of this report) is designed to show the influence that the trees have upon the site by virtue of their size and position. The plan seeks to act as a design tool that shows both the above and below ground constraints presented by the trees. The plan shows the initial RPA which may be modified dependent on site conditions.

The information provided within this section of the report is to assist in the interpretation of the Tree Constraints Plan and aims to ensure that those trees selected for retention can be successfully integrated within the proposed development.

5.2 TREE RETENTION / REMOVAL

The prioritisation for tree retention should be based upon the guidance contained within BS5837:2012. Category A trees should be seen as the highest priority for retention and Category C the lowest.

Category U trees have no retention value and in most circumstances such specimens will not be considered for retention within new development.

When considering which Category C trees to retain in the new development priority should be given to those trees that have been included within this category solely due to their having stem diameters of less than 150 mm at 1.5 m above ground level. These specimens are normally relatively young trees with future potential.

5.3 BELOW GROUND CONSTRAINTS

Root Protection Areas

Root Protection Areas for each tree and group of trees surveyed have been determined in accordance with BS5837:2012 and a schedule of Root Protection Areas is detailed within this Report as Table 3.4.

Initial Root Protection Areas (RPA's) for the trees have been plotted onto the Tree Constraints Plan as circles, with the tree located centrally, extending to encompass the area of ground, and thus the rootable soil volume, required for protection.

Where possible all development, including new hard landscaping, shall be situated outside of the retained trees designated Root Protection Areas.

New Hard Surfaces and Buildings within Root Protection Areas

The construction of new hard surfaces and buildings around trees has the potential to cause soil compaction, to cause root damage and to reduce nutrient and moisture availability to tree roots to the detriment of tree health and vitality.

To minimise harm occurring as a result of such works, where installation of new hard surfacing is proposed within the Root Protection Areas of retained trees, it must be installed in accordance with no-dig principles.

Should new buildings be proposed within the RPA of an existing tree it will be necessary to take steps to minimise the potential impact to the tree to allow construction. In this respect the guidance contained within BS5837:2012 at clause 7.5 should be considered. This states: "*The use of traditional strip footings can result in extensive root loss and should be avoided. The insertion of specially engineered structures within RPAs may be justified if this enables the retention of a good quality tree that would otherwise be lost (usually Categories A or B). Designs for foundations that would minimize adverse impact on trees should include particular attention to existing levels, proposed finished levels and cross-sectional details. In order to arrive at a suitable solution, site-specific and specialist advice regarding foundation design should be sought from the project arboriculturist and an engineer. In shrinkable soils, the foundation design should take account of the risk of indirect damage.*"

Building Foundations

Any structures built on the site should comply with the foundation depths for buildings near or adjacent to trees and allow for the potential size of the trees at maturity. The soil types throughout the site will need investigating and appropriate measures taken.

If trees are removed across the site the potential for soil heave should be assessed and foundations designed accordingly (see NHBC Chapter 4.2, 2014).

Service Runs

All service runs, utilities and similar infrastructure should take note of trees and allow for working methods that will minimise damage to trees by referring to documents such as NJUG Volume 4 - Guidelines for the planning, installation and maintenance of utility services in proximity to trees (National Joint Utilities Group 2007).

5.4 ABOVE GROUND CONSTRAINTS

Existing Canopy Spreads

The existing canopy spreads of the trees on site are shown on the Tree Constraints Plan (Drawing Number C124814-02-01, contained within Section 7 of this report.

The current spread of the tree is a constraint due to its dominance, size and movement in strong winds. It will typically be unacceptable to design any built development within the current spread of a tree.

Where built development is proposed in close proximity to existing trees consideration should be given to the amount of working space required to allow its construction.

Additionally where development is proposed in close proximity to the existing canopy spread of a tree the likelihood of leaf or fruit fall or an accumulation of honeydew causing nuisance must be given.

It should also be noted that where the Root Protection Areas for retained trees do not extend to the edge of existing canopy spreads it is possible that those parts of the trees extending beyond the RPA may sustain damage during construction.

Where this occurs there are two primary options available to manage and minimise the potential for damage to tree canopies during development and these may be used singularly or in combination.

The first option is to create a Construction Exclusion Zone (CEZ), by the erection of protective fencing, around the full extent of the tree's canopy. The second is to undertake pre-development pruning works to the trees to reduce the potential for branch damage to occur.

Future Tree Growth

Some of the trees surveyed are not yet mature and they have the potential for future growth. Where these are to be retained consideration of their ultimate crown spread should be given as future branch growth may result in interference with the proposed development, damage to branches and the need for a tree pruning regime.

Within the area of maximum branch spread, construction activities should be restricted for the long-term health and vigour of the trees. It is considered that within the area of maximum branch spread single storey buildings and the installation of hard surfaces would be an appropriate form of construction, however should car parking be proposed beneath the ultimate spread of trees the likelihood of fruit fall, leaf litter or sap exudation causing a nuisance must be considered.

In addition it is important to consider the likelihood of damage to trees or structures that may be caused by continuous whipping of branches in windy conditions. In such circumstances branches may have to be repeatedly cut back which will introduce wounds in the tree and may spoil its form or shape. In general terms trees should not be retained upon the basis that their ultimate branch spread can be significantly controlled by periodic pruning.

6. RECOMMENDATIONS

The following site-specific recommendations are made:

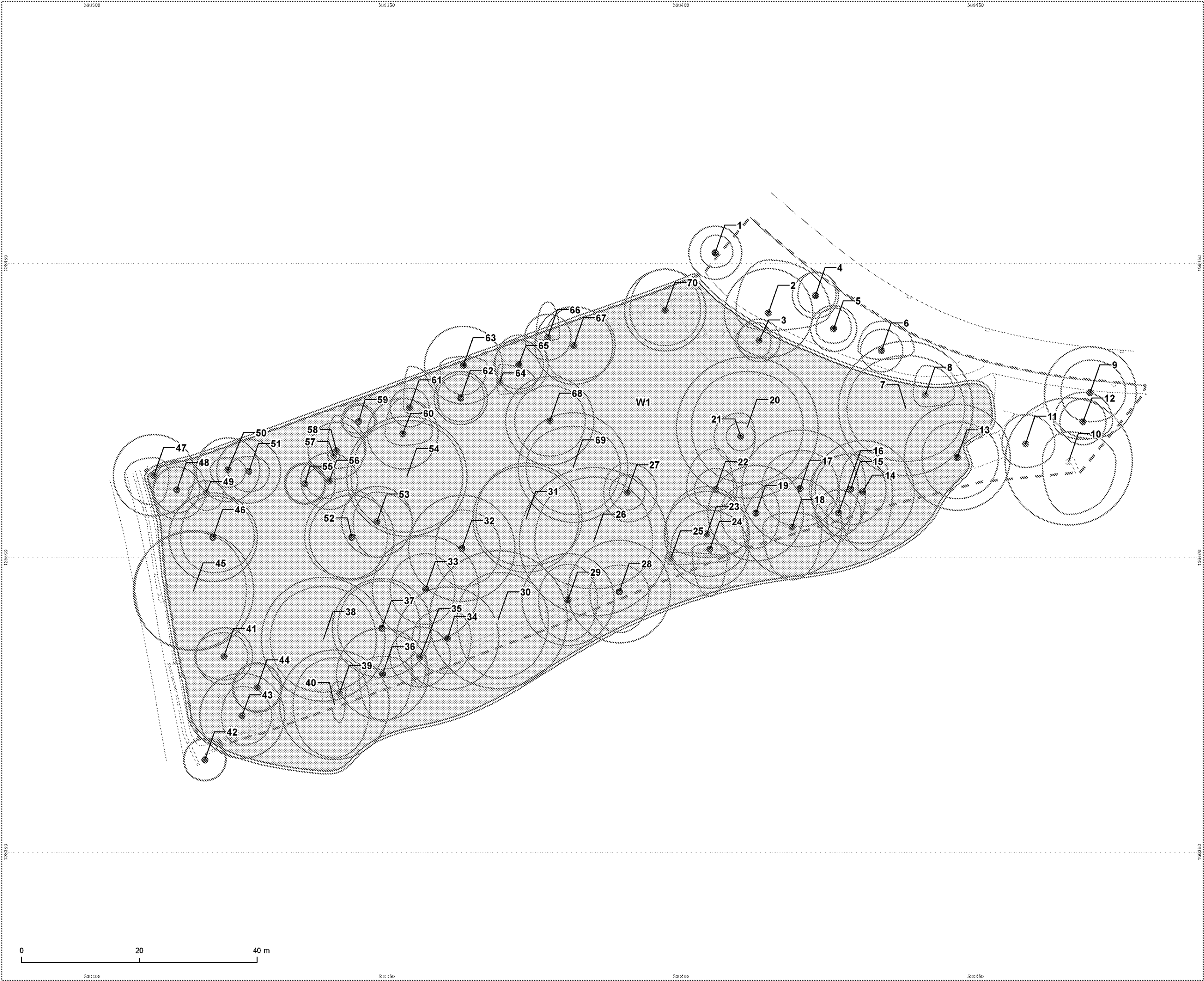
- Given the Ancient Woodland designation of the study area, the Local Planning Authority ecologist and / or the local Wildlife Trust should be consulted prior to any works commencing to determine how works may proceed without adversely impacting this site.
- The retention of the Category A and B trees and woodland across the site should be considered as a priority as these specimens are likely to make a substantial contribution to the continued landscape character of the site.
- The retention of the Category C trees should be considered where possible though it must be noted that these specimens have a low retention value and are likely to only offer a temporary contribution to the landscape character of the site.
- In general all new development shall be located outside of the RPA or canopy spread of any retained tree.
- Where any new development is proposed within the RPA or canopy spread of a retained tree it must be constructed in such a way that damage of the trees root system or crown can be avoided.
- Should new development require works within the RPA of any retained tree an Arboricultural Method Statement should be prepared to set out what steps are to be taken to protect the trees during the course of development.
- Any proposed new planting should consist of native and wildlife attracting species with a robust five year management plan to assist with the development proposal and to offer mitigation for any tree loss.
- This Arboricultural Survey is valid for a period of 12 months. If works are not commenced within this time period then it is advised that the trees are re-inspected to ensure no significant defects have developed since the original survey.

The following generic guidance should also be taken into account during the construction phase of any development, or significant engineering:

- Any trees or woodlands that are to be retained should be adequately protected by Heras fencing, in line with BS5837:2012, extending at least to the Root Protection Radius, to prevent accidental damage by vehicles or contractors (see Table 3.4, pages 19 and 20, for RPA data for each tree).
- All tree works are to be carried out by a competent and qualified arborist to BS3998:2010 standards.
- Tree protection should be included in the induction and/or briefing sessions by the contractors to site personnel.
- Soil compaction, from the storage of large quantities of materials and plant tracking, may result in changes to soil permeability and local drainage. This may lead to waterlogging or loss of soil crumb structure. These effects may in turn lead to root asphyxiation and root death, a cause of instability and or mortality in trees. For this reason, heavy machinery and the storage of materials should be excluded from the crown and Root Protection Radius of all trees.
- The recommendations of BS5837:2012 and National Joint Utilities Group Volume 4 (Guidelines for the Planning, Installation and Maintenance of Utility Services in Proximity to Trees) (as appropriate to operations) should be followed when working close to trees.
- If works take place during the bird breeding season, usually from March to September inclusive, trees and hedgerows should be checked for nesting birds. If any trees are to be removed this should be done outside the breeding season or in the presence of a suitably qualified ecologist.
- Mature trees often contain cavities, hollows, peeling bark or woodpecker holes which provide potential roosting locations for bats. Bats and the places they use for shelter or protection (i.e. roosts) receive European protection under The Conservation of Habitats and Species Regulations 2010, as amended (Habitats Regulations 2010, as amended). They receive further legal protection under the Wildlife and Countryside Act (WCA) 1981, as amended. Consequently causing damage to a bat roost constitutes an offence. As such prior to undertaking works to trees a check to see if they are being used for bat roosting should be undertaken by a suitably qualified and experienced ecologist.

7. DRAWINGS

Drawing Number C124814-02-01– Tree Constraints Plan



C124814-02-01

Legend

- Category A tree
- Category B tree
- Category C tree
- Category U tree
- Category B woodland
- Current canopy extent
- Root Protection Area
- Site boundary

The original of this drawing was produced in colour - a monochrome copy should not be relied upon

Project
Dalloway Road, Arundel, West Sussex

Drawing
Tree Constraints Plan

Client
Saville Jones Architects

Drawing Number
C124814-02-01

Revision
00

Scale @ A3
1:600

Date
April 2017

Approved By
DM

Drawn By
GP

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