ARBORICULTURAL SURVEY

SAVILLE ROAD, GILDROYD, BARNSLEY

A Report to NPS Barnsley Ltd

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1 OF 2

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This study was conducted and compiled by
Ed Lusk HND.Arb, PTI

This report is 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.

Contract Number C114796

July 2013

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1. INTRODUCTION

1.1 PROJECT BRIEF

In July 2013 Middlemarch Environmental Ltd were commissioned by NPS Barnsley Ltd to undertake an Arboricultural Survey of trees growing on land at and adjacent to the site of a proposed development at Saville Road, Gildroyd, Barnsley.

Middlemarch Environmental Ltd have also undertaken an Extended Phase 1 Habitat Survey of the site the results of which are detailed in Report Number RT-MME-114796-01.

1.2 SITE DESCRIPTION

The site under consideration, hereinafter referred to as the study area, is a small parcel of land located to the north of Saville Road in Gildroyd, Barnsley. The study area extends to approximately 0.33ha in size and it is centred on Ordnance Survey Grid Reference SE 323 046.

The study area is dominated by amenity grassland and it contains a small building, a community centre, in its north-western corner and an area of hardstanding in its south-western corner.

The southern boundary of the study area is defined by Saville Road and a footpath runs along the northern boundary. To the east the study area abuts a parade of shops and to the west it abuts existing residential development.

A large mature Oak (*Quercus robur*) tree is located in the north-western corner of the main area of amenity grassland and two over-mature Hawthorn (*Crataegus monogyna*) trees are located in a grassed area to the east of the community centre building. In addition to these specimens three Flowering Cherries (*Prunus* sp.) were located in the south-western corner of the study area and five young Silver Birch (*Betula pendula*) saplings were scattered throughout the main body of the site.

The location of the trees surveyed can be found on Middlemarch Environmental Ltd Drawing Number C114796-02-01.

2. ARBORICULTURAL SURVEY 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 given a unique reference number. Individual trees above 75 mm (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 years. 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 trees 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

Keith Powell (Barnsley Borough Council, 2013, *Pers. Comm.*) confirmed in a telephone conversation on the 31st July 2013 that there are no Tree Preservation Orders within or closely surrounding the site. Keith also confirmed that the site is not situated within a Conservation Area.

3.2 WEATHER CONDITIONS AND PERSONNEL

The survey was completed on 24th July 2013 by Edmund Lusk, Senior Arboricultural Consultant. The weather conditions at the time of the survey are shown in Table 3.1.

Conditions	Result
Temperature (°C)	18
Cloud Cover (%)	15
Precipitation	Dry
Wind Speed (Beaufort)	F1

Table 3.1: Weather Conditions at Time of Survey

3.3 SURVEY RESULTS

Tree, shrub and climber species recorded during the survey are listed in Table 3.2.

Common Name	Scientific Name
Cherry	*Prunus* sp.
Chanticleer Pear	*Pyrus calleryana 'Chanticleer'*
Hawthorn	*Crataegus monogyna*
Oak	*Quercus robur*
Silver Birch	*Betula pendula*

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	Chanticleer Pear	1	100	6.0	2.0 E	1.0	1.0	1.0	1.0	2.0	2.0	2.0	2.0	Y	G	G	20+	C1	• Recently planted tree.	-
2	Oak	1	980	18.0	4.0 W	8.5	9.5	9.0	8.5	3.0	2.5	2.0	3.0	M	G	G	40+	A1	• Minor deadwood in crown. • Old pruning wounds on stem, occluded well.	-
3	Hawthorn	4	330	6.0	2.5 S	2.0	4.0	4.0	4.0	3.0	2.5	2.5	2.5	M	F	F	10+	C1	• Multi-stemmed at base. • Minor deadwood in crown. • Crossing branches in crown. • Stem bark wounds.	-
4	Hawthorn	4	340	6.0	2.5 E	3.5	3.0	1.5	3.5	2.5	2.5	3.0	2.5	M	F	F	10+	C1	• Multi-stemmed at base. • Minor deadwood and crossing branches in crown.	-
5	Cherry	4	420	8.0	2.0 N	5.5	6.0	3.0	4.0	2.0	3.0	4.0	4.0	OM	F	F	10+	C1	• Top grafted specimen. • Multi-stemmed at 1.5m. • Minor deadwood in crown. • Exposed and damaged surface roots.	-
6	Cherry	1	280	8.0	2.0 S	1.5	6.5	6.5	0.0	4.0	3.0	2.5	4.0	OM	F	F	10+	C1	• Heavily suppressed specimen of poor form. • Exposed and damaged surface roots. • Minor deadwood in crown.	-
7	Cherry	2	370	8.0	2.5 S	1.5	6.5	4.0	2.5	4.0	2.0	2.5	4.0	OM	F	F	10+	C1	• Heavily suppressed specimen of poor form. • Bifurcate at 1.5m. • Minor deadwood in crown. • Exposed and damaged surface roots.	-
8	Silver Birch	1	40	3.5	2.0 W	0.5	0.5	0.5	0.5	2.0	2.0	2.0	2.0	Y	D	P	<10	U	• Dead tree.	Fell and remove.
9	Silver Birch	1	40	3.5	1.5 E	0.5	0.5	0.5	0.5	2.0	2.0	2.0	2.0	Y	D	P	<10	U	• Dead tree.	Fell and remove.
10	Silver Birch	1	40	3.5	1.5 W	0.5	0.5	0.5	0.5	2.0	2.0	2.0	2.0	Y	D	P	<10	U	• Dead tree.	Fell and remove.
11	Silver Birch	1	50	3.5	1.5 N	0.5	0.5	0.5	0.5	2.0	2.0	2.0	2.0	Y	D	P	<10	U	• Predominately dead.	Fell and remove.

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							
12	Silver Birch	1	40	3.5	1.5 E	0.5	0.5	0.5	0.5	2.0	2.0	2.0	2.0	Y	D	P	<10	U	• Predominately dead.	Fell and remove.

Key

Age Class
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

Physiological Condition
G: Good = no health problems
F: Fair = symptoms of ill health that may be remedied
P: Poor = poor health

Structural Condition
G: Good = no structural defects
F: Fair = remedial structural defects
P: Poor = significant structural defects

Minor deadwood: branches/twigs less than 50 mm diameter

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 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	Diam (mm)	Approximate Root Protection Radius (m)	Root Protection Area (m^2)
1	Chanticleer Pear	100	1.2	5
2	Oak	980	12	452
3	Hawthorn	330	4.2	55
4	Hawthorn	340	4.2	55
5	Cherry	420	5.1	81
6	Cherry	280	3.6	41
7	Cherry	370	4.5	64

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

4. DISCUSSION AND CONCLUSIONS

4.1 DESK STUDY

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

4.2 TREE QUALITY

Twelve trees have been inspected in accordance with BS5837:2012 'Trees in Relation to design, demolition and construction – Recommendations'.

- One of the trees present was considered to be Category A – Trees of high quality and value
- None of the trees present were considered to be Category B – Trees of moderate quality and value
- Six of the trees present were considered to be Category C – Trees of low quality and value
- Five of the trees present were considered to be Category U – Trees whose immediate removal is advised

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

BS5837:2012 Category	Tree Number
A	2
B	-
C	1, 3, 4, 5, 6, 7.
U	8, 9, 10, 11, 12.

Table 4.1: Summary of Trees in BS5837:2012 Categories

4.3 TREES OF CONCERN

The survey identified three dead and two predominately dead Silver Birch trees within the site. These specimens (numbers 8, 9, 10, 11 and 12) will require removal however at the current time due to their small size they are not considered to be hazardous.

5. RECOMMENDATIONS

The following site-specific recommendations are made:

- The retention of the Category A Oak tree (number 2) should be considered as a priority as this specimen is 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. The following proposals are made for this site:

- Any trees, hedges 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, page 10, 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.

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DRAWINGS

Middlemarch Environmental Ltd Drawing Number C114796-02-01: Arboricultural Survey



C114796-02-01

Legend

- Category A tree
- Category C tree
- Category U tree
- 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

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Project	Saville Road, Gildroyd
Drawing	Arboricultural Survey
Client	NPS Barnsley Ltd
Drawing Number: C114796-02-01	Revision: 00
Scale @ A3: 1:300	Date: July 2013
Approved By: EL	Drawn By: SKS

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QUALITY ASSURANCE

TITLE: ARBORICULTURAL SURVEY

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BARNSLEY

A Report to NPS Barnsley Ltd

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Checked by:

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