Hemingfield, Barnsley

Arboricultural Survey

February 2024

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Contents

1 Introduction

1.1.1.1 This report presents the results of an Arboricultural Survey undertaken on the site at land off Hemingfield Road, S73 0PZ. The site area is approximately 6.78 ha and is centred on Grid Reference SE392018.

1.1.1.2 The Arboricultural Survey has been undertaken to provide supporting information for proposed development of the site.

1.1.1.3 The Arboricultural Survey included a Tree Constraints Survey which was conducted on 1st November 2023 by Daniel Brown (FdSc, TechArborA) under supervision and approval of Andrew Westgarth (CEnv).

Figure 1. Site location and approximate site boundary (Aerial imagery dated 2024)

2 Methodology

2.1.1.1 This Arboricultural survey covers those trees or groups of trees which are considered relevant for the brief. During the survey all relevant individual trees and groups of trees located within and close to the boundary of the site were assessed.

2.1.1.2 The objective of the survey was to collect tree data relevant to the proposed works at the site and to categorise individual trees or tree groups in accordance with BS 5837:2012 'Trees in relation to design, demolition and construction – Recommendations'[1] based on their condition, quality and future potential.

2.1.1.3 The purpose of the categories within BS 5837:2012 is not to determine whether retention of trees is desirable, but 'The purpose of the tree categorization method, which should be applied by the arboriculturist, is to identify the quality and value (in a non-fiscal sense) of the existing tree stock, allowing informed decisions to be made concerning which trees should be removed or retained in the event of the development occurring.' (BS 5837:2012, Section 4.5.2). This survey should therefore be regarded as an initial appraisal with observations recorded for trees within and adjacent to the site. Remedial tree works, foundation design and material specification are not covered within this report.

2.1.1.4 The location of the trees is shown within the attached Tree Constraints Plan (TCP) (Appendix 3). A detailed inspection of the trees with respect to decay, defects and hazard is not included. The tree locations are as shown on the topographical drawing supplied.

2.1.1.5 The site survey was conducted on 1st November 2023 by Daniel Brown (FdSc) in accordance with the BS 5837:2012 methodology[1]. This was under supervision of and then approved by Andrew Westgarth (CEnv BS 5837:2012).

2.1.1.6 Information collected during the survey included species, height, stem diameter, branch spread, height of crown clearance, age class, physiological condition, structural condition, estimated remaining contribution and category grade. The survey was made at ground level using visual assessment of the tree canopy and stem. No removal of vegetation, digging or drilling was undertaken during the survey and parts of the stems of some trees remained partly obscured by vegetation.

2.1.1.7 The TCP in Appendix 4 shows the positions, canopy spreads and Root Protection Areas (RPA) of the trees included within the survey. The RPAs have been calculated in accordance with Section 4.6 of BS 5837:2012. Where significant ground constraints, such as roads, walls, buildings, water bodies are likely to restrict and influence root development, the RPA circles have been adjusted to form a polygon of equivalent area, in order to show the likely rooting area for trees subjected to significant constraints, in accordance with paragraph 4.6.2 of BS5837:2012.

2.1.1.8 When considering the layout of the site and the retention of trees, proposals should generally be kept outside of both the RPA and the canopy spreads. However, it may be possible to encroach into these with access roads, footpaths and parking areas assuming the existing ground levels can be maintained, and the appropriate construction methods are used. No liability can be accepted by Quants Environmental in respect of the trees or for events which happen after the time of the survey.

[1] British Standards Institution (BSI) BS 5837:2012. Trees in relation to design, demolition and construction – Recommendations. Published by BSI Standards Limited 2012. ISBN 978 0 58069917 7.

3 Results

3.1.1.1 The survey results are shown in Appendix 2 (Tree Survey Results – Table 1) and Appendix 3 (Tree Constraints Plan). The trees included within this survey comprise of 12 individual trees, 10 groups of trees and 5 hedgerows;

- 3 tree groups were classified as Category B;
- 11 individual trees were classified as Category C;
- 7 tree groups were classified as Category C;
- 5 hedgerows were classified as Category C; and
- 1 individual tree was classified as Category U.

3.1.1.2 The species on site consisted of predominantly hawthorn *Crataegus monogyna*, blackthorn *Prunus spinosa* ash *Fraxinus excelsior*, sycamore *Acer pseudoplatanus* and willow *Salix* ssp.

3.1.1.3 The majority of the site comprises of fields which are currently used as farmland. The field to the east is grassland, with a section of the area used for horse paddocks. There is a footpath which runs alongside the border of the grazing field which runs from south to north where there is an underpass to cross underneath the 6195. To the south and west of the site are residential properties, with Hemingfield Road running alongside the west and south border.

3.1.1.4 A Tree Preservation Order (TPO) check for the site was carried out via the interactive Barnsley Council website. No trees were found to have TPOs or be located in conservation areas.

3.1.1.5 The trees with the highest value to the site were recorded to be outside of the site area boundary.

3.1.1.6 G2, G5 and G6 are all located along the site boundaries, outside of the site area. All three groups have been plated as a visual screening for the A6195 and comprise of a wide range of species. G5 has a dense understorey comprising of predominantly blackthorn. The three groups provide a collective visual quality to the area, with the groups able to be seen from the wider surrounding area. Therefore, they have all been classified as Category B.

3.1.1.7 G1, G3 and G4 are all located to the northeast of the site area, along the north boundary. G1 is an unmanaged hedgerow with self- sown trees along the site boundary fence. G3 are the larger of these self-sown trees, which comprise of larger stem diameters. G4 is a group of three trees of similar stem diameters to G3 but are situated to the north of the fence line.

3.1.1.8 G7 is a line of young ash trees which are located along the west boundary of the site, outside of the site area. All the trees are in generally good condition, but are of average quality, providing little benefit to the surrounding area. This group has been classified as Category C because of this.

3.1.1.9 G8 and G9 are clusters of self-sown trees along the southern boundary wall. The majority of these trees are multi stem, with no dominant trees within these groups. G10 is also along the southern boundary further along east. This group is not self-sown, which has been planted along the wall side, but has not been managed. All three groups have no significant impact to the site area, and have therebefore been classed as Category C.

3.1.1.10 The remaining trees and hedgerows have been identified as low quality, and with no significant impact to the site so have therefore been classified as Category C.

4 Conclusions and Recommendations

4.1.1.1 During the survey individual trees, 10 groups of trees and 5 hedgerows were surveyed.

4.1.1.2 The majority of trees are along the site boundaries, and so any constraint for proposed development is likely to be along these areas. The only trees not adjacent to the boundaries are T9 and T12.

4.1.1.3 All trees recorded within the site area were found to be of average value, providing little impact to the site area.

4.1.1.4 It is recommended that all Category B trees are retained where possible.

4.1.1.5 Where possible, all Category C trees should be retained to allow retention of existing canopy within the site, however, where removal is required, suitable replacement planting with trees of improved form will likely increase the longevity of the canopy of these trees.

4.1.1.6 With the majority of the site area not incurred on by RPAs, it is not envisaged that tree removal will be needed to accommodate any proposed development. All trees within the site area are Category C, and so if removal of trees is unavoidable, the loss of said trees would be easily mitigable.

4.1.1.7 All tree works are to be conducted by a qualified arborist and are to be in accordance with BS 3998:2010.

4.1.1.8 All retained trees will require protection of their RPAs and canopies during any development of the site.

4.1.1.9 This arboricultural survey supports an application made for outline planning permission. The findings have informed the indicative masterplan and site parameters plan. An Arboricultural Impact Assessment should be produced to inform the detailed layout of the site which would be considered at the reserved matters stage. Further survey work may be required in order to inform the development and to guide mitigation options.'

4.1.1.10 An Arboricultural Tree Protection Plan and Working Method Statement should be produced prior to works commencing on site. This should be informed by the Arboricultural Impact Assessment based on the final site layout. The Arboricultural Tree Protection Plan and Working Method Statement should cover detailed methods for construction and operation within any of the RPAs in order to minimise the potential for adverse effects on these trees, e.g., digging using hand tools and supervision by a suitably qualified arboriculturist, in accordance with BS5837:2012.

4.1.1.11 During supervised work within the RPAs and canopies, if trees are considered to become unsafe e.g., due to unavoidable severance of significant roots, such trees may need to be felled by a qualified tree surgeon. Any such loss of trees should be mitigated where practicable with replacement tree planting on site, to be agreed with the Local Planning Authority. The Arboricultural Tree Protection Plan and Working Method Statement should cover compensation planting as required.

4.1.1.12 Detailed methods for construction and operation should be developed in order to minimise the potential for adverse effects on trees.

4.1.1.13 Where appropriate, all the trees to be retained should be protected with a tree protection fence in line with BS5837:2012 current recommendations.

4.1.1.14 The loss of any trees should be mitigated where practicable with suitable replacement tree planting on site, to be agreed with the Local Planning Authority. Any new landscaping should be maintained to promote longevity.

Appendix 1. Photographs

Photograph 1. Looking S along H1

Photograph 2. Looking towards north boundary.

Photograph 3. Looking along G1 and G3

Photograph 4. Looking E between G1 and G2

Photograph 5. T5

Photograph 6. T6

Photograph 7. G6

Photograph 8. G7 and G8

Photograph 9. Looking NE across site

Photograph 10. T7

Photograph 11. T8

Photograph 12. T9

Photograph 13. T10 and G8

Photograph 14. G9 and T11

Photograph 15. T12

Photograph 16. G10

Photograph 17. H4

Photograph 18. G11

Appendix 2. Table 1 - Tree Survey Results

Tree / Group ref.no	Species	Height (m)	Crown Spread (m)				Crown clearance (m)	Lowest sig. branch and direction	Stem diameter (mm)	Age class	Phys. Condition	Struct. Condition	Comments	Recommendations	ERC	Cat Grade	Radius of Nominal Circle	RPA SqM
			N	E	S	W												
T1	Goat willow	8	5	4	3	3	2	3,N	420	SM	G	G	Tree along hedgerow. Good condition and good crown spread	Retain or remove as per development plans	30+	C2	5.04	79.80
T2	Goat willow	13	2	3	3	2	3	0.5	330	SM	G	G	Codominant stem near ground level	Retain or remove as per development plans	30+	C2	3.96	49.27
T3	Goat willow	13	5	4	3	4	3	N/A	630	M	G	G	Larger tree along hedgerow. N stem growing into fence	Retain or remove as per development plans	30+	C2	7.56	179.55
T4	Goat willow	13	3	3	3	3	3	N/A	500	M	G	G	Trifurcation almost at ground level	Retain or remove as per development plans	30+	C2	6	113.10

Tree / Group ref.no	Species	Height (m)	Crown Spread (m)				Crown clearance (m)	Lowest sig. branch and direction	Stem diameter (mm)	Age class	Phys. Condition	Struct. Condition	Comments	Recommendations	ERC	Cat Grade	Radius of Nominal Circle	RPA SqM
			N	E	S	W												
T5	Oak	8	3	3	3	3	2	2,E	310	SM	G	G	Tree along fence line which has grown into fence resulting in damage to fence.	Retain or remove as per development plans	30+	C1	3.72	43.47
T6	Ash	8	3	3	2	2	1	1,N	240	SM	G	G	Tree outside of fence line with canopy overhang. Past pruning works on power branches growing into field	Retain or remove as per development plans	30+	C1	2.88	26.06
T7	Holly	4	1.5	1.5	1.5	1.5	0	N/A	170	Y	G	G	Small tree along site boundary adjacent to wall	Retain or remove as per development plans	30+	C1	2.04	13.07
T8	Horse chestnut	8	4	4	6	4	1	2,N	450	SM	P	P	Various cavities and wounds which have not fully occluded.	Retain or remove as per development plans	10+	C1	5.4	91.61
T9	Sycamore	5	1	1	1	1	0	N/A	120	Y	G	G	Self sown tree in gap between structure and raised ground level	Remove	<10	U	1.44	6.51

Tree / Group ref.no	Species	Height (m)	Crown Spread (m)				Crown clearance (m)	Lowest sig. branch and direction	Stem diameter (mm)	Age class	Phys. Condition	Struct. Condition	Comments	Recommendations	ERC	Cat Grade	Radius of Nominal Circle	RPA SqM
			N	E	S	W												
T10	Sycamore	4	1	1	1	1	0	N/A	100	Y	G	G	Self sown multistemmed tree along boundary wall.	Retain or remove as per development plans	30+	C1	1.2	4.52
T11	Horse chestnut	7	6	6	6	6	1	2,N	410	SM	G	G	Spreading crown on small tree. Adjacent to large pile of rubble and road to the south.	Retain or remove as per development plans	30+	C1	4.92	76.05
T12	Apple	5	4	5	3	5	0	N/A	250	M	G	G	Trifurcation near ground level. Low spreading crown.	Retain or remove as per development plans	30+	C1	3	28.27
G1	Hawthorn, hazel, goat willow, birch	10	3	3	3	3	4	N/A	240	SM	G	G	Line of trees along site border fence line with dense understorey	Retain or remove as per development plans	30+	C2	2.88	26.06
G2	Goat willow, birch, larch, pine,	13	/	/	/	/	1	N/A	240	SM	G	G	Area of trees providing visual screening from road north of site.	Retain where possible	30+	B2	2.88	26.06

Tree / Group ref.no	Species	Height (m)	Crown Spread (m)				Crown clearance (m)	Lowest sig. branch and direction	Stem diameter (mm)	Age class	Phys. Condition	Struct. Condition	Comments	Recommendations	ERC	Cat Grade	Radius of Nominal Circle	RPA SqM
			N	E	S	W												
G3	Goat willow	13	3	3	3	3	3	N/A	420	SM	G	G	Trees along hedgerow	Retain or remove as per development plans	30+	C2	5.04	79.80
G4	Goat willow	13	4	4	4	4	N/A	N/A	380	M	G	G	Group of three trees behind fence line	Retain or remove as per development plans	30+	C2	4.56	65.33
G5	Blackthorn, ash, rowan, larch, willow	4	/	/	/	/	0	N/A	120	SM	G	G	Large area of dense shrubs along fence line providing visual screening. Shrubs have grown into site area which have been pruned back larger trees further back from the fence line	Retain or remove as per development plans	30+	B2	1.44	6.51
G6	Birch, willow, oak, rowan	10	/	/	/	/		N/A	280	SM	G	G	Group of trees along west boundary. Semi mature and are in good condition	Retain where possible	30+	B2	3.36	35.47
G7	Ash	8	3	3	3	2	N/A	N/A	180	Y	G	G	Row of 5 stems along roadside	Retain or remove as per development plans	30+	C1	2.16	14.66

Tree / Group ref.no	Species	Height (m)	Crown Spread (m)				Crown clearance (m)	Lowest sig. branch and direction	Stem diameter (mm)	Age class	Phys. Condition	Struct. Condition	Comments	Recommendations	ERC	Cat Grade	Radius of Nominal Circle	RPA SqM
			N	E	S	W												
G8	Rowan sycamore	6	3	3	3	3	0	N/A	110	Y	G	G	Self-sown cluster of multi stem trees among rubble.	Retain or remove as per development plans	30+	C1	1.32	5.47
G9	Sycamore	7	2	2	2	2		N/A	200	Y	G	G	Cluster of 7 self-sown trees along site boundary	Retain or remove as per development plans	30+	C1	2.4	18.10
G10	Willow	4	1	1	1	1	0	N/A	110	Y	G	G	Line of planted trees left unmanaged along boundary wall	Retain or remove as per development plans	30+	C1	1.32	5.47
G11	Cherry, Prunus	4	2	2	2	2	0	N/A	200	SM	G	G	Row of three ornamental trees In neighbour property	Retain due to private ownership	30+	C1	2.4	18.10
H1	Hazel, blackthorn, field maple, hawthorn, Goat willow	4	2	2	2	2	0	N/A	200	M	G	G	Hedgerow along border. Wide range of species	Retain	30+	C2	2.4	18.10

Tree / Group ref.no	Species	Height (m)	Crown Spread (m)				Crown clearance (m)	Lowest sig. branch and direction	Stem diameter (mm)	Age class	Phys. Condition	Struct. Condition	Comments	Recommendations	ERC	Cat Grade	Radius of Nominal Circle	RPA SqM
			N	E	S	W												
H2	Hawthorn	3	1	1	1	1	0	N/A	100	M	G	G	Managed hedge along boundary south	Retain or remove as per development plans	30+	C2	1.2	4.52
H3	Hawthorn, hazel, goat willow, birch	4	1	1	1	1	0	N/A	100	SM	G	G	Hedgerow along site boundary east	Retain or remove as per development plans	30+	C2	1.2	4.52
H4	Hawthorn elder	4	1	1	1	1	0	N/A	100	SM	G	G	Hedgerow along south boundary	Retain or remove as per development plans	30+	C2	1.2	4.52
H5	Hawthorn	4	1	1	1	1	0	N/A	100	SM	G	G	Hedgerow along south boundary	Retain or remove as per development plans	30+	C2	1.2	4.52

Key

***** - Denotes estimated measurement where access to tree stems was restricted or not accessible

Tree/ Group Ref No. – tree/group number, to be recorded on tree survey plan where necessary.

Species – common and scientific names where possible.

Height – overall height of tree in metres.

Stem Dia – stem diameter, in millimetres at 1.5m above adjacent ground level (on sloping ground to the taken on the upslope of the tree base) or immediately above the roof flare for multi-stemmed trees.

Branch spread – in meters taken at the four cardinal points to derive an accurate representation of the crown (to be recorded on the tree survey plan where necessary).

Height of cc – height of crown clearance – in meters above adjacent ground level to inform on ground clearance, crown stem ratio and shading.

Age class – young (Y), semi mature (SM), mature (M), over mature (OM) and veteran (V).

Physiological condition – e.g. good (G), fair (F), poor (P) and dead (D).

Structural condition – e.g. collapsing, the presence of decay and any physical defect.

Management recommendations – including further investigations of suspected defects that require more detailed assessment and potential wildlife habitat.

ERC – estimated remaining contribution – in years e.g. less than 10, 10-20, 20-40, more than 40.

Cat grade – category grade – U or A to C, to be recorded in plan on the tree survey plan where possible.

RPA – Root protection area calculated from BS5837:2012 Trees in Relation to Design, Demolition and Construction – Recommendations in sq/m. Where indicated, dimensions of radius of circle or sides of square based around centre point of trunk calculated for design purposes.

Appendix 3. Table 2 - Cascade Chart for the Quality Assessment[2]

Category and definition	Criteria (including subcategories where appropriate)			Identification on plan
Trees unsuitable for retention				
Category U Those 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.	Trees that have serious, irremediable, structural defect, such that their early loss is expected due to collapse including those that will become unviable after removal of other category U trees (e.g., where, for whatever reason, the loss of companion shelter cannot be mitigated by pruning). Trees that are dead or are showing signs of significant, immediate, or irreversible overall decline. Trees infected with pathogens of significance to the health and/or safety of other trees nearby, or very low-quality trees supressing adjacent trees of better quality. *Note: Category U trees can have existing or potential conservation value which it might be desirable to preserve.*			See Table 1
	1 Mainly arboricultural qualities	2 Mainly landscape qualities	3 Mainly cultural values, including conservation	
Trees to be considered for retention				
Category A Trees of high quality with an estimated remaining life expectancy of at least 40 years	Trees that are particularly good examples of their species, especially if rare or unusual; or those that are essential components of groups or formal or semi-formal arboricultural features (e.g., the dominant and/or principal trees within an avenue).	Trees, groups or woodlands of particular visual importance as arboricultural and/or landscape features	Trees, groups or woodlands of significant conservation, historical, commemorative or other value (e.g. veteran or trees or wood pasture).	See Table 1
Category B Trees of moderate quality with an estimated remaining life expectancy of at least 20 years	Trees that might be included in Category A, but were downgraded because of impaired condition (e.g., presence of significant though remediable defects, including unsympathetic past management and storm damage), such that they are unlikely to be suitable for retention for beyond 40 years; or trees lacking the special quality necessary to merit the category A designation.	Trees present in numbers, usually growing groups or woodlands, such that they attract a higher collective rating than they might attract as individuals; or trees occurring as collectives but situated so as to make little visual contribution to the wider locality.	Trees with material conservation or other cultural value.	See Table 1
Category C Trees of low quality with an estimated remaining life expectancy of at least 10 years, or young trees with a stem diameter of <150mm.	Unremarkable trees of very limited merit or such impaired condition that they do not qualify in higher categories.	Trees present in groups or woodlands, but without this conferring on them significantly greater collective landscape value; and/or trees offering low or only temporary/transient landscape benefits.	Trees with no material conservation or other cultural value.	See Table 1

[2] The British Standards Institute 2012, Page 9 – Table 1.

Appendix 4. Tree Constraints Plan

General Notes
Do not scale off drawing - refer to the tree data schedule for accurate crown spread measurements.
Depictions of tree canopies are based on measurements taken to four cardinal compass points.
No liability of any kind is accepted for any omissions or inaccuracies in respect of this plan.
The original of this drawing was produced in colour; a monochrome copy should not be relied upon.

G6-B2
G5-B2
T6-C1
T5-C1
G2-B2
G1-C2
T4-C2
T2-C2
T3-C2
G4-C2
H1-C2
T1-C2
G3-C2
T13-C2
T14-C2
H3-C2
G7-C2
T7-C1
HEMINGFIELD RD
T8-C1
T12-C1
T9-U
T10-C1
G8-C1
T11-C1
G9-C1
G10-C1
BRIERY MEADOWS
H2-C2
H5-C2
G11-C1
H4-C2

Key

- Trees — Showing Canopy extents, category colour and tag number (with category) with optional RSB direction arrow.
- Category A — Trees of high quality with an estimated remaining life expectancy of at least 40 years.
- Category B — Trees of moderate quality with an estimated remaining life expectancy of at least 20 years.
- Category C — Trees of low quality 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 can not realistically be retained as living trees in the context of the current land use for longer than 10 years.
- Tree Groups — Shown as dashed centre/boundary line. Colour represents category (see above)
- BS 5837:2012 Root Protection Area

N

1:400
0 10 20m

Drawing Title:
Tree Constraints Plan

Client:
Ptarmigan Land North Ltd

Site/Project:
Hilltop Farm, Hemingfield Road, Hemingfield Barnsley.

Scale/Sheet	Date		
1:400 - A0	07/11/2023		
Drawing No:	Rev:	Drawn By:	Chked By:
1870.1	1	CS	DB

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