



Duramen

Arboricultural Report



to consider trees at

Harebreaks Adventure Playground & Recreation Area
Leggatts Way
Watford
WD24 6NX

CLIENT:

**Watford Borough
Council**

Ref: 16018

Site Visit Date:
10/11th May 2016
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1 Introduction

- 1.1 This report provides the results of a tree survey at Harebreaks Adventure Playground & Recreation Area, Leggatts Way, Watford, WD24 6NX.
- 1.2 Long term plans for the location are being considered and this report has been provided in order to inform the design process.
- 1.3 A topographic survey (Ref: Landform surveys ref B152A-001 dated 18/4/16) has provided the locations of all significant trees on the site.

2 Overall Site Description

- 2.1 The surveyed area is approximately rectangular in shape measuring approximately 250 metres North-South and 130 metres East-West giving an area of around 2.1 ha. The majority of the area is occupied by mature oak trees with a variety of understorey.
- 2.2 An adventure playground is located in the Northern part of the surveyed area. The site slopes gently towards the West, with the Western most edge sloping more steeply towards Leggatts Way.
- 2.3 Watford Borough Council is the relevant planning authority for the site. The Council may have served Tree Preservation Orders on the trees described in this report, resulting in their legal protection. It is recommended that, before any tree works are undertaken, a check on tree protection status is made with the Council's planning department, as unauthorised works to protected trees may lead to prosecution.

3 Scope of Tree Survey

- 3.1 This report provides the results of a tree survey undertaken on 10th and 11th May 2016. The tree survey was conducted in accordance with the recommendations provided in British Standard 5837:2012 *Trees in relation to design, demolition and construction - Recommendations*. Only trees with a diameter

greater than 7.5 cm at 1.5 metres height above ground level were included in the survey. Due to visibility restrictions, only a relatively few tree heights were recorded. Small scale regeneration and scrub trees were ignored for the purposes of the survey.

- 3.2 All trees included on the topographic survey were considered for inclusion in the survey. The survey had no obvious boundary on its Eastern edge and woodland continues towards the East.
- 3.3 Where two or more trees grow close to each other they have been recorded as **Groups** rather than individual **Trees**. Branch growth of one tree may influence nearby trees, leading to asymmetric branch development and possibly dead branches due to shading. As a result, individual trees within groups of trees are best managed both as individual trees and as part of a larger group.
- 3.4 The parameters assessed for each tree, the methods used and their limitations are described in Appendix 1 to this report. The survey should be considered to be of a preliminary nature in some respects. If significant trees are considered worthy of retention but constrain development of a site it may be appropriate to examine the trees in more detail. This might entail removing ivy growing on the tree, examining the tree for fungal growth and wood decay particularly internally, using investigative tools such as ultrasound (PICUS tomography), drill (various tools) or climbing the tree to examine above ground structures. In some circumstances soil excavation may be appropriate to examine roots. Where heavy undergrowth or other features hinder access or visibility of a tree their removal or reduction may be advisable. These tools will be recommended where necessary but not on a precautionary basis unless significant safety issues are apparent.
- 3.5 The full British Standard methodology consists of a number of steps:
 - A **tree survey** records the location of each tree along with estimates of size and quality. In particular, the life expectancy of each tree is assessed so that those trees expected realistically to provide long lasting benefits are identified.
 - A **tree constraints plan** plots the constraints, in terms of ground area, that each tree requires if it were retained. Both above (i.e. branches) and below ground (i.e. roots)

constraints are considered. The above ground constraints are defined by branch length (i.e. crown size) whilst below ground constraints are assessed by defining a root protection area (RPA) for each tree. Typically the RPA for each tree is at first defined as an area shaped as a circle with the tree located at the circle's centre; modification of the RPA shape may be necessary to take into account the presence of infrastructure or poor rooting environments.

- An **arboricultural impact assessment** assesses the impact of any particular design on existing trees based on the footprint(s) of the proposed building(s), hard landscaping, paths, driveways etc. and space required for construction activity including material storage, machinery access, service runs and scaffolding.
- Where building works are likely to be in close proximity to important trees a **method statement** may be required to both reassure Council planning officers and inform building site operations. An arboricultural method statement is best supervised by an arboricultural supervisor.
- A **tree protection plan** shows the location of proposed protective fences around retained trees and other measures such as ground protection.

3.6 This report provides the first two steps of the above. If considered necessary further details can be provided once a construction method statement (or equivalent) has been prepared.

3.7 Where valuable trees have been identified and are to be retained it is best to respect the identified root protection areas of these trees by avoiding building works within the root protection areas and routing access and service runs elsewhere.

4 Results of Tree Survey

4.1 The survey recorded 138 individual or groups of trees. 38 of these were within the adventure playground. Details of the trees are provided in Appendix 3 to this report. Their locations are shown in Duramen Plan 16018-1 ver. A.

- 4.2 129 of the surveyed trees were of oak with three beech recorded at the North-East corner of the surveyed area. A small number of ash, birch, cherry, hawthorn, sycamore and horse chestnut were recorded. Small horse chestnut and oak regeneration is noticeable.
- 4.3 The oak is of a range of diameters up to 1005 mm (T28) and 1040 mm (T138). Various trees show a variety of early veteran characteristics but none of the trees could clearly be labelled as veteran. The public information board at the entrance to the wood describes the wood as semi-natural ancient woodland with 16 ancient woodland indicator species.
- 4.4 Using the BS5837 tree quality assessment categorisation (see Appendix 2) – 40 trees were graded Category “A” – High quality trees, 61 were graded Category “B” – Moderate quality trees and 8 (T79, T79a, T96, T112, T133, T134, T135, T137) were graded as Category “U” – Unsuitable for retention. The remaining trees were judged to be Category “C” – Low quality trees.

5 Tree Constraints on the site within surveyed area

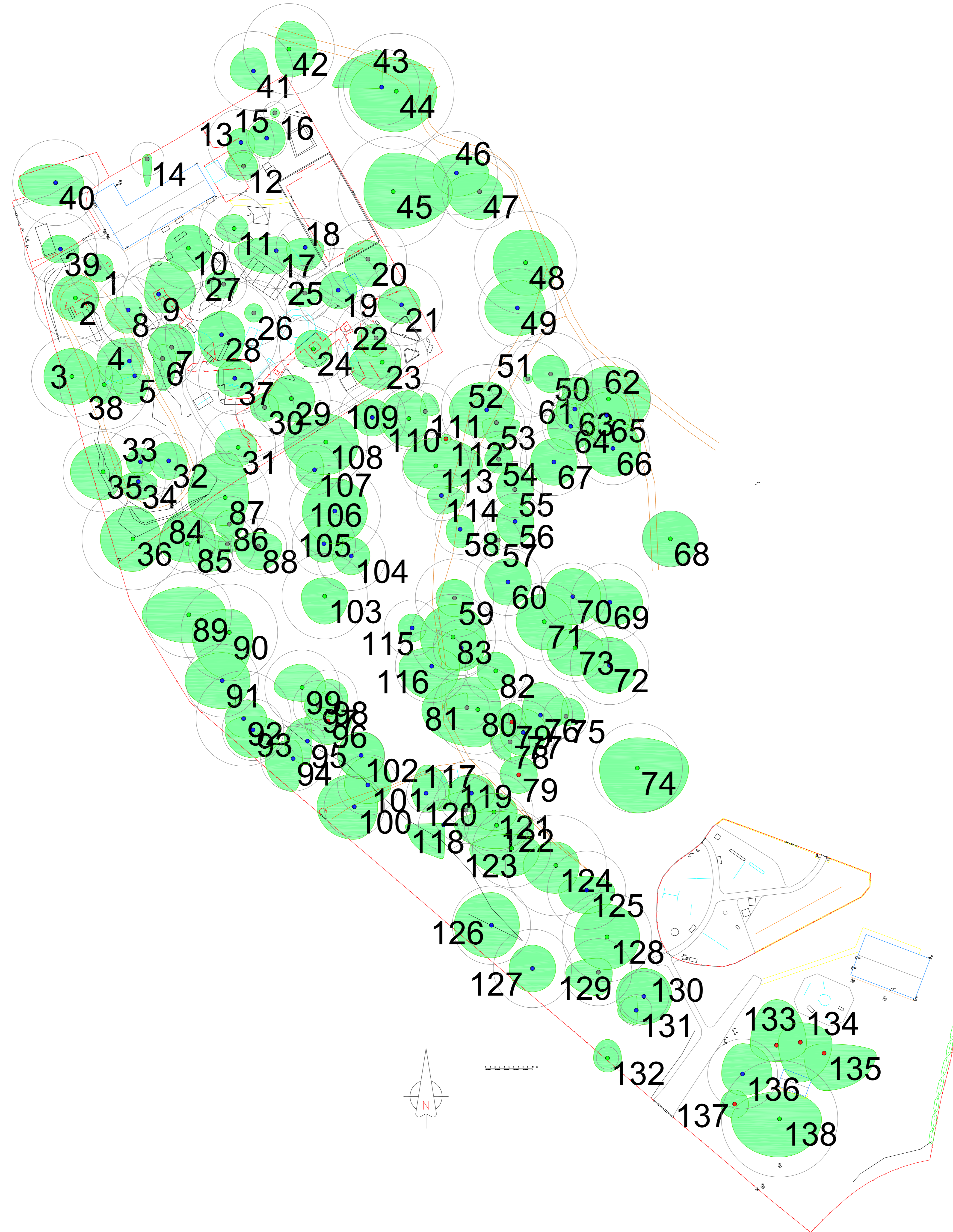
- 5.1 A very large proportion of the adventure playground and a large proportion of the woodland are covered by the root protection areas (RPAs) of the surveyed trees. Furthermore the ground flora is of value and locations of rare indicator species are best identified to ensure they are not disturbed.
- 5.2 Due to the disturbed nature of the soil (and its compaction due to footfall) within the adventure playground there is potential to improve the rooting conditions of the trees by removing the excess soil and decompacting the rooting areas. Development within the woodland is possible but care will be needed to locate roots and avoid them if the need for excavation arises. New flat surfaces can be developed using 3-D geotextiles with porous surfaces, allowing the infiltration of rainwater and the exchange of gases.

6 Tree Constraints Plan

Legend

127  Tree location & crown

- Grade A tree
- Grade B tree
- Grade C tree
- Grade U tree



Rev	Date	By	Issue
Client	Watford Council		
Project	Harebreaks		
Drawing Title	Tree Constraints Plan		
Drawing Status			
Scale	Date	Drawn	
1:500 to fit A0	May 2016	JH	
Drawing No	Checked	Approved	

Appendix 1 - Notes & Limitations of the Tree Survey

Data collected on each recorded tree reflects the recommendations provided in paragraphs 4.4.2.5 of British Standard 5837:2012. Deviations from the recommendations of the British Standard are described and justified below.

The report does **NOT** comply with NHBC 4.2 D8 (a) Vegetation Survey in that it does not identify ALL currently small but potentially large trees, hedgerows and shrubs on the site and on adjacent sites. It does however identify currently significant trees with stem diameters greater than 7.5 cm and any significant tree stumps that are found during the survey. The tree survey is guided by the topographic survey, where provided by the client, to identify the area of interest and the individual trees that need to be surveyed.

The following abbreviations and conventions have been used in this report. Please note the limitations in **bold**, particularly with regards to tree stability and resulting safety issues.

Tree Number: T (individual tree), G (group of stems/trees, possibly of coppice origin (i.e. originating from a single tree) or several trees planted together or self-seeded) or S (stump of tree, normally cut at or nearby ground level). Shrubs (Sh) may also be recorded where they are considered to provide amenity or privacy that it may be desirable to retain post development.

Species: Commonly known name; Scientific name is recorded separately, if considered significant and useful.

Height: Height of a tree can normally be estimated with a clinometer where adequate visibility allows lines of sight to be established with both the base and top of the tree. To provide an accurate estimate of height, these sightlines should stretch to a distance from the tree at least as great as the tree is high (i.e. 20m for a 20m tall tree). Where several trees of similar height grow nearby it is reasonable to measure one tree and estimate the heights of nearby trees by comparison.

In small gardens and restricted places where this is not possible, height may have to be estimated based on the surveyor's experience. No record is normally made of which trees were used as reference trees. Tree heights from a ground survey (where available) can also be used as reference heights.

Stem Diameter: Larger stems which are likely to define the edge of root protection areas are normally measured at 1.5m above ground level with a diameter tape to the nearest millimetre. Those trees that are less likely to define the edge of the root protection area, or which were difficult to access may have been assessed visually by use of reference instruments such as tape measures or other objects of known size (e.g. a sheet of A4 paper – 21 x 30 cm). Where ivy and other vegetation such as holly, or slope or other considerations prevent accurate measurement the diameter estimate is marked with a * to show it is approximate. Estimates are stated in millimetres.

Where more than one shoot grows at 1.5m above ground level, the diameter has not been measured at 1.5 m but above the root flare, normally where diameter is smallest between 0.2 and 0.5m above the ground. Such estimates will be recorded as "RF".

Branch spread: This parameter records the radial distances between the tree trunk and the end of the furthestmost branches in the direction of the four cardinal compass points. Where light conditions allow these have been measured on the largest trees using a laser device to the nearest 0.1m. In most cases however, unless the crowns look visibly uneven due to branch loss or neighbouring competing vegetation, circular crowns are assumed, and only one figure is reported.

Crown Clearance: This parameter estimates the lowest point of the crown from the ground. Minor and dead branches are ignored.

Age Class: Y: Young; M: Middle Aged; MT: Mature; OM: Over Mature; V: Veteran

Physiological Condition: Good (healthy); Fair (some signs of lack of vigour and/or poor health); Poor (definite signs of lack of vigour and/or poor health); Dead

Structural Condition: Comments on structural condition of trees are restricted to what was seen of each tree - access and/or visibility restrictions may limit the scope of the assessment; a complete health and safety audit was **NOT** conducted, but where defects were observed that need further investigation a recommendation for more detailed examination may be provided. Alternatively an annual inspection may be recommended (e.g. of a roadside tree). If the tree is of little further value, removal of the tree may be recommended without further investigation suggested.

Observations on tree health and structural condition and stability and resulting recommendations may change with time. Trees are living organisms and climatic events (e.g. strong wind, drought, lightning, floods), human actions (e.g. vehicles, machinery, vandalism, application of chemicals) and other vectors (e.g. pests & diseases) may alter the health and/or structural stability of trees over relatively short periods of time. Annual reassessments are recommended for most trees that occur nearby property, areas of frequent use and other areas where a duty of care might be considered to apply. **Thus our assessment of structural condition is valid on the day of inspection** and for the vast majority of trees should be adequate for twelve months from the date of the survey. In a small proportion of cases however trees may appear healthy and structurally sound on the day of inspection, provide little or no sign of having health, stability or structural problems but rapidly deteriorate at a later date or over a period of time. Vigilance is therefore recommended and if signs of significant structural or health change are seen, further professional advice should be sought. **No liability can be accepted for any structural deterioration of the tree occurring after the date of our inspection or that was not visible on the day of inspection.**

Where this report is relied upon at a later date and in particular over 12 months from the date of the tree survey, the reader should be aware that the structural condition and health of the surveyed trees may have changed and a re-inspection may lead to significantly different observations, recommendations and conclusions. This is especially important where trees cause significant constraints to development of a site.

Where an inspector from Duramen Consulting has seen what he or she considers to be a "dangerous" tree the inspector will attempt to inform a responsible person on site verbally and for both occupied and non-occupied sites the nature of the danger provided by the tree will be recorded in the data sheet.

Additionally, some tree structural defects may be difficult to see through other vegetation such as brambles or tall herbaceous plants, ivy and other climbers growing on stems; in some cases visibility is restricted through lack of 360° access to the base of the tree. Partial sight of one side of a tree may mean that serious defects can be overlooked. Cutting the main stems of climbers around the base of each tree is recommended in many cases. Such cutting should lead to their death over several years and allow a more thorough visual inspection at a later date once the climber has been removed or naturally decayed and fallen off. Species such as ivy may provide habitats for a variety of wildlife species, some of which, like bats, may be legally protected. In some cases further advice on wildlife legislation may be advisable (see below).

Preliminary Management Recommendations: Where action is recommended a preliminary suggestion is made. Further discussion is likely to be needed to assess the need and its priority. Removal of ivy may be useful; crown pruning to remove dead wood may be recommended if new buildings are to be erected nearby a tree or if access to the tree is likely to increase; sometimes complete tree removal may be suggested. The action recommended is the minimum required and may not include other factors such as the desire to keep the tree in an attractive shape or stump removal.

Estimated Remaining Life Contribution: No standardised method is recognised for making estimates of remaining life span of a tree. The estimates given are based on a rapid assessment of the health and structural condition AND the location of the tree in relation to any targets. Thus a roadside tree with a particular defect may be given a lesser life expectancy than a similar tree located deep in rarely visited woodland.

Category Grading: British Standard 5837 (BS) suggests the use of four categories for tree quality - three for tree retention (A, B and C) and one for unsuitability (U). For retained trees, three subcategories are suggested by the BS - arboricultural (1), landscape (2) and cultural/conservation (3). Grade "A" trees are of high quality and value making a substantial contribution with a life expectancy over 40 years. Grade "B" trees are of moderate quality and value making a significant contribution with a life expectancy over 20 years; Grade "C" trees are of low quality and value with a life expectancy over 10 years or young trees with a stem diameter less than 150mm.

Category "U" trees are mostly recommended for removal due to serious, irremediable structural defects or health conditions but in some cases their retention may be desirable.

Appendix 2 contains further details of the BS categories.

Wildlife considerations: Legislation in the United Kingdom protects a range of plant and animal species. The two groups of protected animals most commonly encountered with regards to trees are birds and bats. Trees by their very nature have structures that may allow bats to shelter or roost in them. These include cracks in bark, ivy growth and crevices and cracks in structural wood of both bole and branches that may develop over the lifetime of a mature tree. Reasonable care must be taken whilst undertaking any tree work to identify the presence of bats and/or bat roosts. Work must stop if any are found and advice sought from an appropriately licensed person. A qualified bat ecologist should be able to provide more detailed advice.

The tree survey described and recorded in this report did not include a scoping survey for protected species. Up to date details of such protection, including birds and their nests is best sought from a qualified ecologist.

Appendix 2: BS 5837 categorisation for tree quality

Appendix 2: BS 5837 categorisation for tree quality: Cascade chart for tree quality assessment (after BS5837:2012)

Category and definition		Criteria (including subcategories where appropriate)		
Trees unsuitable for retention (see Note)		<ul style="list-style-type: none"> Trees that have a 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, and irreversible overall decline Trees infected with pathogens of significance to the health and/or safety of other trees nearby, or very low quality trees suppressing adjacent trees of better quality <p>NOTE: Category U trees can have existing or potential conservation value which it might be desirable to preserve</p>		
Trees to be considered for retention		3 Mainly cultural values + conservation		
		2 Mainly landscape qualities		
		1 Mainly arboricultural qualities		
Category A		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)		
Category B		Trees that might be included in category A, but are 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		
Category C		Unremarkable trees of very limited merit or such impaired condition that they do not qualify in higher categories		
<p>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</p> <p>Sub Categories:</p>		<p>Trees of high quality with an estimated remaining life expectancy of at least 40 years</p> <p>Trees of moderate quality with an estimated remaining life expectancy of at least 20 years</p> <p>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</p>		
		Trees, groups or woodlands of significant conservation, historical, commemorative or other value (e.g. veteran trees or wood-pasture)		
		Trees, groups or woodlands of particular visual importance as arboricultural and/or landscape features		
		Trees present in numbers, usually growing as groups or woodlands, such that they attract a higher collective rating than they might as individuals; or trees occurring as collectives but situated so as to make little visual contribution to the wider locality		
		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 material conservation or other cultural value		
		Trees with no material conservation or other cultural value		

Tree data for Harebreaks Recreation Area and woodland

Date of survey: 10 & 11/05/2016

Arboricultural Consultant/surveyor:

JH
Intermittent
rain & Dry

Tagged: Partial

Weather & Light conditions:

Warm

Overcast

Calm

Tag Number	Number of stems	Species (Common Name)	Height (m)	Stem diameter (mm)	Branch spread (m) North, East, South, West				Height of crown clearance (m)	Age class	Estimated remaining contribution (years)	Growth Potential	Structural condition (pole, forks, wounds, decay, dead wood)	Physiological Condition	Other Comments - Ivy, Competing Crowns, Open Grown	Root Protection Area (radius equiv m)	BS 5837 Category Grading
G1	3	Sycamore (x2), Horse Chestnut		307	3	3	3	3	2	Semi Mature	20 - 40 years	High	Labels #0007, 0008, 0006. Waste beside 0007. 0006 beside gate.	Good		3.7	C
2	1	Oak		735	5	5	5	5	4	Mature	> 40 years	Low	0012 erect, crown lidfted, beside wooden structure	Good		8.8	A
3	1	Oak		725	6	6	6	6	2	Mature	> 40 years	Low	0016 branches over others	Good	Minor Ivy	8.7	A
4	1	Oak		581	5	3	5	7	4	Mature	> 40 years	Low	0018 4x bark wounds. Waste to E	Fair		7.0	B
5	1	Oak		528	0	3	6	5	3	Mature	> 40 years	Low	0019	Fair		6.3	B
6	1	Oak		555	3	3	7	2	4	Mature	20 - 40 years	Low	Major bark wounds W + N. Epicormic. 0020 or 0028	Fair		6.7	C
7	1	Oak		545	5	5	3	5	2	Mature	20 - 40 years	Low	0021 Broken top	Fair		6.5	C
8	1	Oak		605	3	3	5	5	2	Mature	> 40 years	Low	Cannot read label. Leans W	Good		7.3	B
9	1	Oak		642	7	8	4	3	4	Mature	> 40 years	Low	Wooden structure surrounds. 0063	Good		7.7	B
10	1	Oak		735	5	5	5	5	3	Mature	> 40 years	Low	Erect stem. Rope attached. 0062	Good		8.8	A
11	1	Oak		622	3	3	3	4	2	Mature	> 40 years	Low	Erect stem. 0055	Good		7.5	A
G12	2	Birch, Pussy Willow		W=272, B=210	3	3	3	4	2	Mature	10 - 20 years	Moderate	0065 willow, 0064 birch	Good		3.3	C
13	1	Oak		595	3	3	5	3	2	Mature	> 40 years	Low	Lean NW. 0066. Dead top			7.1	B
G14	M	Hazel, Beech, Oak		300 *	1	1	6	1	2				0079 Beech, 0077 Oak, 0067 Oak, 0073 Beech (bark wounds), 0071 Hazel, 0072 Beech. Linear feature close to security fence			3.6	C
15	1	Cherry		368	4	4	4	4	4	Mature	20 - 40 years	Low	Outside of fence		Ivy	4.4	B
G16	M	Willow, Ash, Hawthorn		200	1	1	1	1	0	Mature			Mixed group. Lean in Willow. Erect Ash, Shrubby Hawthorn	Fair		2.4	C
17	1	Oak		676	3	3	5	9	1	Mature	> 40 years	Low	0053 Lean W			8.1	B
18	1	Oak		520	2	4	5	4	2	Mature	> 40 years	Low	0057 Lean W			6.2	B
19	1	Oak		748	4	4	4	4	2	Mature	> 40 years	Low	0049			9.0	B
20	1	Oak		693	4	4	6	5	2	Mature	> 40 years	Low	0051 Lack of buttress N, slight lean/basal bow		Ivy	8.3	C
21	1	Oak		733	4	4	4	5	4	Mature	> 40 years	Low	0046 woodpecker holes on upper stem		Ivy	8.8	B
22	1	Oak	8	732	3	2	4	4	4	Mature	20 - 40 years	Low	0048 ivy; fork at 4m both with lost top			8.8	C
23	1	Oak	25	824	4	4	6	7	12	Mature	> 40 years	Low	0038 erect high crown			9.9	A
24	1	Oak		607	4	4	4	4	5	Mature	> 40 years	Low	Structure surrounds, no label			7.3	A
25	1	Oak	6	495	1	3	3	4	4	Mature	20 - 40 years	Low	Lost top; 0056			5.9	C
26	1	Oak		585	2	2	2	2	4	Mature	10 - 20 years	Low	Topped; 0059	Poor	Ivy to upper stem	7.0	C
27	1	Oak		412	3	3	3	4	3	Mature	20 - 40 years	Low	Minor bark wounds; 0061			4.9	C
28	1	Oak		1005	5	5	7	5	6	Mature	> 40 years	Low	Buttresses; possibly decay where hollow is - picus/drill?			12.1	B
29	1	Oak		693	5	5	5	5	6	Mature	> 40 years	Low	0035			8.3	A
30	1	Oak		526	3	3	3	3	2	Over Mature	< 10 years	Low	Top lost? under ivy; 0034	Poor	Very heavy ivy	6.3	C
31	1	Oak		671	4	4	4	5	5	Mature	> 40 years	Low	Holly at base	Good		8.1	A

Category: A: High Value - Light Green; B: Moderate Value - Mid Blue; C: Low Value - Grey; U: Unsuitable for Retention - Red

Tree data for Harebreaks Recreation Area and woodland

Tag Number	Number of stems	Species (Common Name)	Height (m)	Stem diameter (mm)	Branch spread (m)				Height of crown clearance (m)	Age class	Estimated remaining contribution (years)	Growth Potential	Structural condition (pole, forks, wounds, decay, dead wood)	Physiological Condition	Other Comments - Ivy, Competing Crowns, Open Crown	Root Protection Area (radius equiv m)	BS 5837 Category Grading
					North	East	South	West									
32	1	Oak		500 *	4	4	4	4	2	Mature	> 40 years	Low	Holly at base; 0025; bark	Good	Ivy up main stem	6.0	B
33	1	Oak		660	3	3	3	3	2	Mature	> 40 years	Low	Surface buttress; 0027	Good		7.9	B
34	1	Oak		481	2	4	4	4	2	Mature	> 40 years	Low	0029	Good		5.8	B
35	1	Oak		717	6	4	6	7	2	Mature	> 40 years	Low	Snails on stem!. Over road; 0028	Good		8.6	A
36	1	Oak	20	912	7	6	7	7	3	Mature	> 40 years	Low	0030	Good		10.9	A
37	1	Oak		647	4	4	4	4	3	Mature	> 40 years	Low	0058; topped/broken top with regrowth	Good		7.8	B
38	1	Oak		799	4	4	4	4	3	Mature	> 40 years	Low	0017	Good		9.6	A
39	1	Oak		648	3	4	3	4	3	Mature	> 40 years	Low	0003; high level fork; some dead wood	Good		7.8	B
40	1	Oak		767	4	6	5	8	2	Mature	> 40 years	Low	Lean S; forks, dead wood over parking area	Good		9.2	B
41	1	Oak		706	5	3	4	5	4	Mature	> 40 years	Low		Good	Minor Ivy	8.5	B
42	1	Beech		812	6	6	6	3	4	Mature	> 40 years	Low	Small lean N; wet bark; beside path - surface roots	Good		9.7	A
43	1	Beech		681	7.6	0	0	10	8	Mature	20 - 40 years	Low	Lean NE; surface roots			8.2	B
44	1	Beech		1034	7.3	8.7	8.7	10	6	Mature	> 40 years	Low	Fork at 6m; surface roots	Good		12.4	A
45	1	Oak		990	8.3	13	8 *	6.3	8	Mature	> 40 years	Low	Some dead wood	Good		11.9	A
46	1	Oak		740	4	7	5	5	4	Mature	> 40 years	Low		Good		8.9	B
47	1	Oak		675	4	5	6	7	3	Mature	20 - 40 years	Low	Signs of decay between buttresses E; vertical bark wounds (strip) to 7m; holly understorey			8.1	C
48	1	Oak		919	7	7	7	7	3	Mature	> 40 years	Low	Lean S; high level fork; dead wood	Good		11.0	A
49	1	Oak		700 *	6	6	6	7	4	Mature	> 40 years	Low	holly/beech under hawthorn; fork; broken upper level stem	Good		8.4	B
50	1	Oak		747	4	4	4	4	2	Mature	10 - 20 years	Low		Fair	Very heavy ivy	9.0	C
51	1	Oak		684	1	1	1	1	10	Over Mature	< 10 years	Low	Dead buttress root S; loose bark; extensive die back; young cherry beside	Poor	Heavy Ivy	8.2	C
52	1	Oak		810	6	6	6	8	5	Mature	> 40 years	Low			Minor Ivy	9.7	B
53	1	Oak		500 *	1	5	5	3	4	Mature	> 40 years	Low			Ivy	6.0	C
54	1	Oak		500 *	3	3	3	3	6	Mature	> 40 years	Low			Ivy	6.0	C
55	1	Oak		500 *	5	4	4	4	6	Mature	> 40 years	Low	Fork at 6m		Ivy	6.0	C
56	1	Oak		500 *	4	4	5	4	10	Mature	> 40 years	Low			Heavy Ivy	6.0	B
57	1	Oak		400 *	2	0	3	3	6	Mature	20 - 40 years	Low			Ivy	4.8	C
58	1	Oak		450	3	3	4	3	8	Mature	20 - 40 years	Low	Dead wod in lower crown		Ivy	5.4	B
59	1	Oak		700	4	4	4	4	3	Mature	20 - 40 years	Low	Exposed dead wood W; lost top with recovery.		Ivy	8.4	C
60	1	Oak		600 *	5	5	5	5	4	Mature	> 40 years	Low			Ivy	7.2	B
61	1	Oak		300	3 *	3	3	3	5					Poor	Very heavy ivy	3.6	C
62	1	Oak		750	7	9	7	7	2				Lean E	Good		9.0	A
63	1	Oak		400	4	4	4	4	5						Heavy Ivy	4.8	B
64	1	Oak		500 *	5	5	5	5	5						Ivy	6.0	B
65	1	Oak		500 *	5	5	6	5	5				High level fork		Ivy	6.0	B
66	1	Oak		650 *	6	6	6	6	6	Mature	> 40 years				Heavy Ivy	7.8	B
67	1	Oak		600 *	5	5	5	5		Mature	> 40 years		Lean E		Ivy	7.2	B
68	1	Oak		500 *	6	6	6	6		Mature	> 40 years		Lean E		Ivy	6.0	A
69	1	Oak		700 *	5	7	5	5					Deep Wound (N)		Ivy	8.4	B
70	1	Oak		600 *	6	6	6	6		Mature	> 40 years	Low			Ivy	7.2	B
71	1	Oak		700 *	6	6	6	6	3						Ivy	8.4	A
72	1	Oak		700	6	6	6	6							Ivy	8.4	B

Category: A: High Value - Light Green; B: Moderate Value - Mid Blue; C: Low Value - Grey; U: Unsuitable for Retention - Red

Tree data for Harebreaks Recreation Area and woodland

Tag Number	Number of stems	Species (Common Name)	Height (m)	Stem diameter (mm)	Branch spread (m)			Height of crown clearance (m)	Age class	Estimated remaining contribution (years)	Growth Potential	Structural condition (pole, forks, wounds, decay, dead wood)	Physiological Condition	Other Comments - Ivy, Competing Crowns, Open Crown	Root Protection Area (radius equiv m)	BS 5837 Category Grading	
73	1	Oak		600	4	6	6	6	4					Ivy	7.2	A	
74	1	Oak	20	806	6.5	11	9.6	8.1	4	Mature	> 40 years	Low	Minor dead wood; fork at 5m	Good		9.7	A
75	1	Oak	11	400 *	4	4	2	1	2	Mature	10 - 20 years	Low	Dead top	Fair		4.8	C
76	1	Oak		575	7	6	3	4		Mature			Minor dead wood	Good		6.9	B
77	1	Oak		575	5	5	5	5		Mature						6.9	B
78	1	Oak		350	2	0	4	4		Mature				Fair		4.2	C
79	1	Oak		450	4	4	4	4					Massive burn at ground level	Dead	Ivy	5.4	U
79a	1	Oak		350	4	3	3	3					Old fungal bracket on root (N); dead upper stem			4.2	U
80	1	Oak		800	7	5	8	12	4	Mature	> 40 years	Low				9.6	A
81	1	Oak		400 *	3	0	0	5	4				In holly; dead main stem			4.8	C
82	1	Oak		550	4	4	4	4	2	Mature	> 40 years	Low				6.6	A
83	1	Oak		500	4	5	5	5	3	Mature	> 40 years	Low				6.0	B
83a	1	Oak		765	7	7	7	7	5							9.2	A
84	1	Oak		500	7	6	4	6	4	Mature	> 40 years	Low				6.0	A
84a	1	Oak		395	4	4	4	4	6							4.7	C
85	1	Oak		505	2	2	2	2	4				Dead wood			6.1	C
86	1	Oak		500	3	3	3	3	4	Mature	10 - 20 years	Low	Dead top; bark wound E to 2m; bark wound W at ground	Fair	Ivy	6.0	C
87	1	Oak		790	10 *	5 *	6	8	3	Mature	> 40 years	Low	Fork at 6m	Good		9.5	A
88	1	Oak		500	3	5	5	5	4	Mature	> 40 years	Low	Dead/broken N	Good	Ivy	6.0	C
89	1	Oak		764	6	8	6	10	2	Mature	> 40 years	Low		Good		9.2	A
90	1	Oak		864	5	5	10	8	3					Good		10.4	A
91	1	Oak		650	6	6	6	8	4	Mature	> 40 years			Fair		7.8	B
92	1	Oak		850	4	5	4	4	3	Mature	> 40 years			Good		10.2	B
93	1	Oak		550	3	6	6	6	3					Good		6.6	B
94	1	Oak		580	4	2	7	6	3					Good		7.0	B
95	1	Oak		315	5	1	5	5	4					Fair		3.8	B
96	1	Oak		650	3	5	5	5	3	Mature	< 10 years	Low	wound (N) 0.5m; decayed inner wood with hole - inner wood soft	Good		7.8	U
97	1	Oak		450	3	3	3	3	6	Mature	> 40 years		2 burrs	Fair		5.4	C2
98	1	Oak		500	4	4	4	3	3				dead main stem	Fair		6.0	A3
99	1	Oak		668	5	5	3	6	4	Mature	> 40 years					8.0	A
100	1	Oak	12	540	7	5	7	8	2	Mature	> 40 years					6.5	B
101	1	Oak		540	6	5	4	5	3		> 40 years	Low				6.5	B
102	1	Oak		422	5	5	5	5	4		> 40 years	Low				5.1	B
103	1	Oak		763	4	5	6	5	3							9.2	A
104	1	Oak		614	4	4	4	4	5				lean S			7.4	B
105	1	Oak		566	4	4	4	4					dead top			6.8	B
106	1	Oak		821	7	7	7	7	2	Mature	> 40 years	Low	lean E; dead wood in upper crown	Fair		9.9	B
107	1	Oak		450	4	2	4	4	4	Mature	> 40 years	Low			ivy	5.4	B
108	1	Oak		750	6	7	7	9	5							9.0	A
109	1	Oak		600	4	4	4	4	3				broken top	fair	ivy	7.2	B
110	1	Oak		550	6	4	6	6	4							6.6	A
111	1	Oak		500	4	3	1	1	4	Over Mature	10 - 20 years	Low			ivy	6.0	C2

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Tree data for Harebreaks Recreation Area and woodland

Tag Number	Number of stems	Species (Common Name)	Height (m)	Stem diameter (mm)	Branch spread (m)				Height of crown clearance (m)	Age class	Estimated remaining contribution (years)	Growth Potential	Structural condition (pole, forks, wounds, decay, dead wood)	Physiological Condition	Other Comments - Ivy, Competing Crowns, Open Grown	Root Protection Area (radius equiv m)	BS 5837 Category Grading
					North	East	South	West									
112	1	Oak		300	1	1	1		Over Mature	10 - 20 years	Low	dead top	Dead	Heavy Ivy	3.6	U	
113	1	Oak		600	6	10	5	7	6						7.2	A	
114	1	Oak		450	2	5	4	3	5						5.4	B	
115	1	Oak		500	3	3	3	3	6						6.0	B	
116	1	Oak		650	4	6	7	7	3	Mature	> 40 years	Low		Minor Ivy	7.8	B	
117	1	Oak	12	350	6	5	4	3	2	Mature	> 40 years	Low			4.2	B	
118	1	Oak	12	450	0	0	7	8	4	Mature	20 - 40 years	Low	lost top; crown to W&S	minor ivy	5.4	B	
119	1	Oak		600	4	5	4	5	4	Mature	> 40 years		wound E ground		7.2	B	
120	1	Oak		600	4	0	0	6	4	Mature	20 - 40 years		dead wood on main stem @ 5-6m		7.2	C2	
121	1	Oak		700	4	5	4	5	4	Mature	> 40 years	Low	lost top	Good	8.4	A	
122	1	Oak		575	3	8	5	9					Good		6.9	A	
123	1	Oak		700	3	6	6	9	4				Good		8.4	A	
124	1	Oak		900	5	5	6	7	2				Good		10.8	A	
125	1	Oak		700	3	6	5	6	4				Fair		8.4	B	
126	1	Oak	16	700 *	7	6	7	8	5	Mature	> 40 years	Low	branch wound E(1m); on edge of slope with exposed roots	Good	8.4	B	
127	1	Oak	14	700 *	5	5	5	5	4	Mature	> 40 years	Low	on slope with exposed roots and gaps between roots; lost top	Fair	8.4	B	
128	1	Oak	16	800 *	7	7	7	7	6	Mature	> 40 years	Low		Good	9.6	A	
129	1	Oak	14	600 *	3	3	5	7	4	Mature	20 - 40 years	Low	dead top; dead wood S	Fair	7.2	C2	
130	1	Birch	12	450 *	6	6	6	6	3	Mature	> 40 years	Low	relatively small tree	Good	5.4	B	
131	1	Oak	14	280	3	0	3	4	4	Mature	20 - 40 years	Low	fluting to lower stem	Good	3.4	B	
132	1	Ash	10	200 *	4	3	3	3	1	Young	> 40 years	High	beside fence	Good	2.4	A	
133	1	Ash	14	725	9.8	6.4	3.5	5.6	6	Mature	< 10 years	Low	just coming into leaf - almost leafless; broken upper stem; holes	Fair	8.7	U	
134	1	Ash	20	828	4.2	6.8	8.5	4.7	6	Mature	< 10 years	Low	just coming into leaf; broken upper stem	Fair	9.9	U	
135	1	Oak	14	698	2	11	8	4.3	6	Over Mature	< 10 years	Low	upper stem broken; fork: 6m; hole near base - twig enters into soft wood; early leaf - possibly nearly dead	Poor	8.4	U	
136	1	Oak		625	6.5	6.3	4.6	4.5	3				lost top	Good	7.5	B	
137	1	Oak	14	678	3	3	3	3	3				lower branches green; upper crown dead	Poor	8.1	U	
138	1	Oak	19	1040	5.8	9	8.2	10	1						12.5	A1	

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