

ARBORICULTURAL REPORT

Site Address	Village Hall, Beech Park, West Hill, EX11 1UQ
Client	West Hill Parish Council
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CONTI	ENTS	PAGE
1.0	EXECUTIVE SUMMARY	3
2.0	INTRODUCTION	3
3.0	SCOPE AND LIMITATIONS OF REPORT	4
4.0	SITE AND SURROUNDINGS	5
5.0	TREE POPULATION	5 - 7
6.0	TREE CONSTRAINTS	7 - 8
7.0	STATUTORY PROTECTION AND GUIDANCE	8 - 9
8.0	ARBORICULTURAL IMPACT ASSESSMENT	10 - 13

APPENDICES

APPENDIX 1:	TREE SURVEY SCHEDULE
APPENDIX 2:	SURVEY METHOD

DRAWINGS

DRAWING 1: TREE SURVEY PLAN





1.0 EXECUTIVE SUMMARY

- 1.1 This is a small site containing two category B Silver Birch and a mixed hedge.
- 1.2 The proposed footpath will make an incurrence into the root protection area (RPA) of one of the Birch trees.
- 1.3 The incurrence into the RPA is unlikely to cause immediate death or instability in the tree, but it is possible that future signs of ill health could become apparent as a result of necessary root pruning to allow construction of the path.
- 1.4 If the proposed path gains planning permission, an Arboricultural Method Statement (AMS) and a Tree Protection Plan (TPP) will be required to outline suitable tree protection measures for the protection of the trees during construction.

2.0 INTRODUCTION

- 2.1 East Devon Tree Care Ltd has been commissioned by Anne Oliver, Clerk to West Hill Parish Council, to produce an Arboricultural Report, an Arboricultural Impact Assessment (AIA) and a Tree Survey Plan (TSP) at West Hill Village Hall.
- 2.2 The survey was carried out by qualified Arboricultural Consultant Matthew Shute on 29.04.21 by means of a visual inspection from ground level assisted by the use of a nylon mallet, wire probe and binoculars. No aerial inspection or invasive probing or drilling was undertaken. No electronic decay detection was used for this report. Where a more detailed assessment/inspection of a particular feature is deemed necessary it has been recommended in the survey schedule.
- 2.3 Tree heights and spreads was measured using a trupulse laser measure.
- 2.4 Trees were assessed in accordance with BS 5837:2012 "Trees in Relation to Design, Demolition and Construction Recommendations". This is a basic collection of data to determine the condition of the trees at the time of surveying. Tree species and their dimensions are recorded in the tree survey schedule together with their ages, condition and category codes in accordance with the guidelines set out in the British Standard. See Appendix 1 of this report.
- 2.5 The report is based on the following drawings and documents, which have been supplied by the client:

Proposed site plan: i.03772-SK-001-P4

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3.0 SCOPE AND LIMITATIONS OF REPORT

- 3.1 The survey is concerned with trees with a stem diameter greater than 75mm at 1500mm above ground level and within the red highlighted area shown on the tree survey plan
- 3.2 The supplied site plan included base positions of both of the inspected trees.
- 3.3 Neither of the trees included within this report were tagged. Tree numbers are shown on the TSP and should be easily identifiable on site.
- 3.4 Soil type was not determined on site. This report makes no reference to the possible effects of tree roots and shrinkable soils, and any possible effects on building foundations.
- 3.5 Information regarding the location of any existing or proposed below-ground services was not provided for the purpose of the report.
- 3.6 Trees are large dynamic organisms whose health and condition can change rapidly; therefore, due to the changing nature of trees and other site considerations, this report and any recommendations made are only valid for the twelve-month period following 29.04.21.
- 3.7 All rights in this report are reserved. No part of it may be reproduced or transmitted, in any form or by any means, electronic, mechanical, photocopying, recording or otherwise, or stored in any retrieval system of any nature, without our written permission. Its content and format are for the exclusive use of the client. It may not be sold, lent, hired out or divulged to any third party not directly involved in this site without the written consent of East Devon Tree Care Ltd.



4.0 SITE AND SURROUNDINGS

4.1 The surveyed area is a small area of land located to the south of West Hill Village Hall, between the car park and the play area. The extent of the survey area is shown as the red polygon on the plan below.



IMG 1: Site location

5.0 TREE POPULATION

- 5.1 Within the surveyed area are two Silver Birch and one mixed hedge adjoining West Hill Road.
- 5.2 **Tree Quality Categorisation.** Under BS 5837:2012 "Trees in Relation to Design, Demolition and Construction Recommendations", trees and groups are objectively assigned a quality category designed to quantify their value within any future development. The table has been reproduced in Appendix 2.
- 5.3 **Category A Trees.** Trees of high value, including those that are particularly good examples of their species and/or those that have visual importance or significant conservation or other value. It is essential to retain these trees. The design of the proposed development should take into account the retention of category A trees.
 - 5.3.1 There were no category A trees recorded in the survey.

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- 5.4 **Category B Trees.** Trees of moderate value, including those that do not qualify as category A due to impaired condition and/or those that collectively have higher value than they would as individuals; also trees with material conservation or other value. The design of the proposed development, where feasibly possible, should take into account the retention of category B trees. A design layout that suggests the removal of category B trees has an increased risk of planning refusal.
 - 5.4.1 Both inspected trees are Silver Birch (Betula pendula) on a narrow strip of grass to the south of the car park. Both trees are in good condition physiological and structural condition.



IMG 2: Overview of trees. T1 on the left.

- 5.5 **Category C Trees.** Trees of low value, including those with very limited merit or impaired condition; trees offering transient or temporary landscape benefits. Due to their generally low quality it would not be a great loss if they had to be removed if they were a significant constraint to the design or construction process of the proposed development. Particular attention is drawn to the phrase "significant constraint".
 - 5.5.1 H1 is a small hedge comprising of mainly Common Beech and Oak. Several semis mature stems are present in the group but within the survey area the mean stem diameter is approximately 50mm in diameter.

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- 5.6 **Category U Trees.** This category signifies trees that are in such a condition that any existing value would be lost within 10 years and that should, in the current context, be removed for reasons of sound arboricultural management.
 - 5.6.1 **There were no category U trees recorded in the survey.**
- 5.7 **Visual Amenity of Trees**. Both trees are moderately sized and are visible from West Hill Road and from the Village Hall. I therefore consider the trees to be of moderate amenity value.

6.0 TREE CONSTRAINTS

6.1 Below-ground Constraints

- 6.1.1 Development processes and changes to land use that lead to soil compaction in tree rooting zones and physical damage to trees can adversely affect long-term tree health. Any digging down beneath existing ground levels within the RPAs of retained trees is likely to cause root damage that could cause potentially damaging affects to tree health and/or tree stability. The RPAs of all the trees surveyed have been calculated and plotted onto the TSP.
- 6.1.2 Infrastructure Requirements –Services, etc. The installation of services within the rooting zones of trees can have a detrimental impact on the long-term survival of retained trees, leading to their unnecessary loss or root failure in high winds. Where the installation of services within the RPAs of retained trees is unavoidable, appropriate work methods will be required to ensure the safe long-term survival of those trees. This process will require additional consultation with a qualified Arboricultural Consultant and is likely to be more expensive than conventional trench installation.

6.2 Ground Level Changes

- 6.2.1 A rise or reduction in soil level can have major implications on the longevity and health of the trees. Minor changes (up to 100mm) can be tolerated in some cases but is heavily dependent on tree species, and their condition and growing environment.
- 6.2.2 Existing ground levels within the RPA should be respected as far as is reasonably practicable. The advice of a qualified Arboricultural Consultant should be sought if level changes are required.



6.3 Above-ground Constraints

6.3.1 **Low branches.** The existing canopy heights and low branches form a constraint to development. Existing canopy heights and the height and orientation of the lowest significant branches have been recorded as part of this survey. Wherever possible, the development should be planned so that they are outside of the canopy lines to minimise the impact on all the trees that are to be retained.

7.0 STATUTORY PROTECTION AND GUIDANCE

7.1 National Planning Policy Framework (NPPF)

7.1.1 The NPPF assumes protection of all ancient woodland and veteran trees unless it can be clearly demonstrated that the need for, or benefits of, development outweigh the loss. In this respect ancient woodland is defined as an area that has been wooded continuously since at least 1600 AD and a veteran as a tree of exceptional value for wildlife, in the landscape or culturally, because of its great age, size or condition.

7.1.2 On this site there is no ancient woodland.

- 7.1.3 Veteran trees often provide a range of rich but scarce habitats supporting many rare and endangered species and are an irreplaceable part of England's landscape and biological heritage.
- 7.1.4 For sites where veteran trees are valued for their historic, landscape and biological importance, the continuity of wildlife habitat is one of the fundamental issues. In such sites, there must be the key aim that there should be no avoidable loss of veteran tree habitat by using current best practice to maintain the wildlife and environmental value of the site while meeting obligations in law with respect to duty of care.
- 7.1.5 The standing advice also recommends a larger root protection area for mature veteran trees is extended to least 15 times the diameter of the stem, or the canopy spread plus 5m, whichever being the greater.

7.1.6 None of the surveyed trees are veterans.



7.2 Tree Preservation Orders (TPOs) & Conservation Area Designations

- 7.2.1 Local authorities reserve the right to create TPOs to protect the amenity value conferred to a location by a tree or group of trees. Where a TPO is in force, the lopping, topping, felling and uprooting of or wilful damage to a tree are prohibited and such actions may be prosecuted and incur a fine. Works to TPO protected trees must only be undertaken with the written consent of the local authority.
- 7.2.2 Neither of the inspected trees are subject to a tree preservation order nor are they within a conservation area. No statutory protection applies to these trees.

7.3 Protected Species – Birds

- 7.3.1 Trees are a potential habitat for nesting birds, which (as well as their nests and eggs) are protected under the Wildlife and Countryside Act 1981 (as amended). This makes it an offence to intentionally or recklessly damage or destroy an active bird nest or any part thereof.
- 7.3.2 Due to the suitability of the trees within the survey boundary for nesting birds, any tree work should ideally be undertaken outside the bird nesting season (British bird nesting season: March to August inclusive).
- 7.3.3 If this is not possible then a detailed inspection of each tree should be undertaken by a qualified ecologist immediately prior to the arboricultural works. Should an active nest be found (being built, or containing eggs or chicks) then any work likely to affect the nest must be halted and a working boundary of 5m left intact around the nest until the nest becomes inactive.



8.0 ARBORICULTURAL IMPACT ASSESSMENT

Tree Quality Category	Α	В	С	U
Trees that can be retained		2		
Trees that will be removed		0		



IMG 3: Proposed footpath

8.1 Proposal

8.1.1 The development proposal is the construction of a pedestrian entrance between West Hill Road improving access to the village hall and the school. It will involve the creation of a path and the removal of a short length of the hedge bank within H1.

8.2 Below ground implications

8.2.1 The grassed areas where these trees are growing, forms a slight hump above the car park. This raised ground will need to be lowered to allow the construction of a new footpath with a gentle slope down to the road.

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IMG 4: Raised grass area in route of proposed path.

- 8.2.2 The lowering of the ground level and construction of the proposed path will make an incurrence of 700mm into one side of the 2.4m radius RPA of T2. RPAs are calculated to be the minimum size area of undisturbed ground that a tree needs to support a viable rooting area.
- 8.2.3 No-dig products have been designed to allow the construction of footpaths within RPAs. These systems essentially build up a footpath and sub-base above the existing ground level to avoid the need to sever roots and reduce the harmful effects of soil compaction. The elevated profile of the grass area above the car park means that in this case, building up above the existing ground level is not practical because it would form too steep a gradient of the path as it connects with the footpath on West Hill Road.
- 8.2.4 By making an incurrence of 700mm into the RPA, and lowering the grass hump, it is likely that tree roots will be severed. This severance will occur approximately 1.2m from the stem. I do not think that the severance of these roots will cause instability of the tree in the short term but could result in inducing dysfunction in the tree and reducing its longevity.

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- 8.2.5 The path, in its current form, could be constructed without felling the tree, but the severance of its roots cannot be avoided. If the Parish Council wish to retain the tree, then a trench will need to be hand dug or excavated with an air spade to allow tree roots to be pruned prior to any mechanical excavations. This scenario allows retention of the tree in the short term, but periodic monitoring will need to be made to ensure the effects of the root severance do not cause dysfunction which may elevate the risk of the tree failing.
- 8.2.6 Removal of T2 would be a reasonable alternative to root pruning and any monitoring of the tree for dysfunction. If the Parish Council would prefer this option, then it is recommended that an agreement is made to plant at least two replacement trees on the site and secured by a condition of planning.
- 8.2.7 Where the path joins West Hill Road, a 3.5m section of H1 will need to be removed, including removal of the bank from which it grows. This section of the hedge predominantly contains small diameter stems. The removal of a small section of the bank does not cause constitute any significant arboricultural impacts.

8.3 Above ground implications

8.3.1 The proposed footpath passes beneath the canopy of T1, which is currently as low as 2m above the car park. If T2 is retained, pruning to increase canopy clearance to 4m above the path will be necessary.

8.4 Mitigation for Tree Removals

8.4.1 If the Parish Council would prefer to remove T2, then two replacement trees should be planted on the site. It is recommended that these should include a replacement Silver Birch, but also an English Oak to provide a long-lived species of tree which could make a much more significant contribution to the site.

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8.5 Tree Protection Requirements

- 8.5.1 It is recommended that should the planning permission be granted, there is a planning condition that a an Arboricultural Method Statement and a Tree Protection Plan are produced. These documents will outline to the contractors working on site exactly what tree protection measures are required to protect the trees on the site. These documents will include:
 - Exact location and type of tree protection fencing and ground protection to be used.
 - Hand digging and root pruning beside T2 (if retained).
 - Machine excavation of the bank and removal of spoil.
 - Location of contractors parking and ground protection measures if outside of the site.
 - Material storage and mixing areas.
 - General precautionary measures for tree protection during construction.



APPENDIX 1: TREE SURVEY SCHEDULE (Please see Appendix 2 for method survey)

Village Hall, Beech Park, West Hill, EX11 1UQ

Type and Tree No	Species	Height (m)	No of Stems	Stem Diameter/s (mm)	Branch Spread North (m)	Branch Spread East (m)	Branch Spread South (m)	Branch Spread West (m)	Height of Canopy above Ground Level (m)	Height and Direction of Lowest Branch (m)	Life Stage	Root Protection Area Radius (m)	Root Protection Area (m ²)	Condition	Comments and Recommendations	Estimated Remaining Contribution (Years)	Category
T1	Betula pendula (Silver Birch)	14	1	300	3	2	2	3	2	4N	EM	3.6	6.4	G		20+	B1
T2	Betula pendula (Silver Birch)	13	1	200	2	1	2	2	2	4W	EM	2.4	4.3	G		20+	B1
H1	Fagus sylvatica (Beech) Quercus robur (Oak)	1.5	ms	50										G		20+	C3



APPENDIX 2: SURVEY METHOD

The survey of the trees has been conducted from ground level only. The nature of the soils on site has not been assessed. Trees are dynamic living organisms with a constantly changing structure; even trees in good condition can suffer from damage or stress. The information recorded is presented as being correct at the time of the survey. The following features of each tree, group of trees or wood may have been recorded in the Tree Survey Schedule in Appendix 1.

ТҮРЕ	Tree, Hedgerow, Woodland, Group										
TREE NO	Corresponding to tag (where tagged).										
SPECIES	The common name is given. The Latin abbreviation may also be given.										
HEIGHT (M)	Existing height recorded to the nearest half metre for dimensions up to 10m and the nearest whole										
	metre for dimensions over 10m.										
STEM DIA @ 1.5M	Diameter of tree trunk measured at 1.5m above ground level, or immediately above root flare for trees										
	With r	with more than 1 stem below 1.5m from ground level. Recorded in millimetres, rounded to the nearest 10mm (0.01m)									
BRANCH SPREAD	Radia	Recorded in minimetres, rounded to the hearest 10mm (U.U1m).									
(M)	Recor	ded to the nearest half metre for dim	ension	s up to 10m and the nearest whole metre for							
	dimer	nsions over 10m.									
EXISTING HEIGHT	Existi	ng height in metres above ground leve	el of fir	st significant branch and direction of re-growth.							
OF FIRST	Recor	ded to the nearest half metre for dim	ension	s up to 10m and the nearest whole metre for							
SIGNIFICANT	dimer	nsions over 10m.									
	(e.g.,	2.4-N)									
GROWTH											
EXISTING HEIGHT	Existi	ng height to lowest significant live bra	nch me	easured in metres. Distance is measured to lowest							
OF CANOPY (M)	point	of branch above ground level.									
	Recor	ded to the nearest half metre for dim	ension	s up to 10m and the nearest whole metre for							
	dimer	dimensions over 10m.									
LIFE STAGE	Y	Young									
	SM	Semi-mature									
	EM	1 Early mature									
	М	Mature									
	OM	Over-mature									
_	V	Veteran									
CONDITION	G	Good – trees showing signs of good vigour									
CONDITION	F	Fair – trees showing signs of fair vigour									
	Р	Poor – trees showing signs of poor vigour									
	D	Dead trees									
	<10	Short – less than 10 years									
REMAINING	10+	10+ Low – 10-20 years									
CONTRIBUTION	20+	+ Medium – 20-40 years									
	40+ High – 40 years or more										
CATEGORY	Each tree/group is identified with a retention category in accordance with BS 5837:2012.										
GRADING	See "	ee "Cascade Chart for Tree Quality Assessment" overleaf.									
NOTES	NF	Not found on plan	FI	Requires further inspection							
	PE	Plotted by eye on plan	BK	Potential bat roost							
		Works urgont		Tree not tagged							
	DF	Diameter estimated									
	CF	Canopy estimated									
	NP	In neighbouring property									



CASCADE CHART FOR TREE QUALITY ASSESSMENT

(from British Standard 5837:2012 "Trees in Relation to Design, Demolition and Construction – Recommendations")

TREES UNSUITABLE FOR RETENTION							
Category and Definition	Criteria			Identification on Plan			
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 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 U category trees (i.e. 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. NOTE: Category U trees can have existing or potential conservation value that it might be desirable to preserve.						
TREES TO BE CONSIDERED FOR RETE	NTION						
Category and Definition	Criteria - Subcategories 1. Mainly Arboricultural Qualities	2. Mainly Landscape Qualities	3. Mainly Cultural Values, including Conservation	ldentification on Plan			
Category A Those 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 of 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 trees or wood- pasture).	LIGHT GREEN			
Category B Those of moderate quality with an estimated remaining life expectancy of at least 20 years	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 beyond 40 years; or trees lacking the special quality necessary to merit category A designation.	Trees present in numbers, usually 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 with material conservation or other cultural value.	MID BLUE			
Category C Those of low quality with an estimated remaining life expectancy of at least 10 years or young trees with a stem diameter below 150mm	Unremarkable trees of very limited merit or such impaired 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.	GREY			

