

BONHAMS FIELD YAPTON

TREE REPORT (Tree survey and constraint advice)



Ecology
Archaeology
Arbiculture
Landscape Architecture



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Table of Contents

1.0	Executive Summary	3
2.0	Introduction	4
3.0	Scope and Method of Survey	6
4.0	Discussion	8
5.0	Recommendations	11
	Appendix 1: Tree Categories Explained	15
	Appendix 2: Tree Survey Schedule	16
	Appendix 3: Tree Reference Plan.....	21

1.0 Executive Summary

- 1.1. This report provides survey information about the trees on the site at Bonhams Field, Yapton, in accordance with the recommendations of BS5837:2012 Trees in relation to design, demolition and construction. This is to identify the quality and value of existing trees on site, allowing decisions to be made as to the retention or removal of trees in the case of any development.
- 1.2. There are forty-four trees included within the survey. Three of these were graded as category three A, seven as B and thirty-one as C. In addition, two groups and three hedgerows were surveyed and recorded.
- 1.3. There are three individual category U trees on the site which could be removed as good arboricultural practice.
- 1.4. Trees of A and B category should be considered as constraints to development and every attempt should be made to incorporate them into any proposed development design. Trees of a category C and U will not usually be retained where they would impose a significant constraint to development. Category U trees are often in such a condition that they will be lost within 10 years, and may be removed as good arboricultural practice.
- 1.5. This report has been revised following an additional site survey to update the data collected in August 2016. The main differences are T31 which is located offsite in a private garden has been removed.

2.0 Introduction

- 2.1. ACD was ordinarily instructed by Seaward Properties Limited, in July 2016, to survey and categorize the trees at Bonhams Field, Main Road, Yapton, in accordance with the British Standard¹. ACD was further instructed to update the tree survey in December 2019. The survey includes all trees with a stem diameter greater than 75mm stem diameter at a height of 1.5m that are on site or close enough to pose a potential constraint to development.
- 2.2. Individual trees, groups of trees and hedgerows have been assessed for their quality and benefits within the context of proposed development. The quality of each tree, or group of trees has been recorded by allocating to it one of four categories. A tree reference plan is provided in order to assist with the design of site layouts.
- 2.3. This report provides the data and advice outlined in the British Standard only. It must not be substituted for a tree risk assessment. Detailed tree inspection including decay mapping, aerial inspection, soil analysis, etc. was not undertaken. If further detailed inspection is deemed necessary, then it will be made clear within this report.
- 2.4. From assessing the controlling authority's interactive website in August 2016 the south-eastern part of the site falls within Main Road/Church Road conservation area. The council will require prior notification of six weeks before any work to trees is carried out. On the eastern boundary, a tree preservation order TPO/Y/1/10 covers off site trees 15-24. The image overleaf shows the extents of the conservation area denoted by blue hatching and TPO by a red hatching:

¹ BSI, 2012. *BS5837 Trees in relation to design, demolition and construction- Recommendations*, London: British Standards Institute.

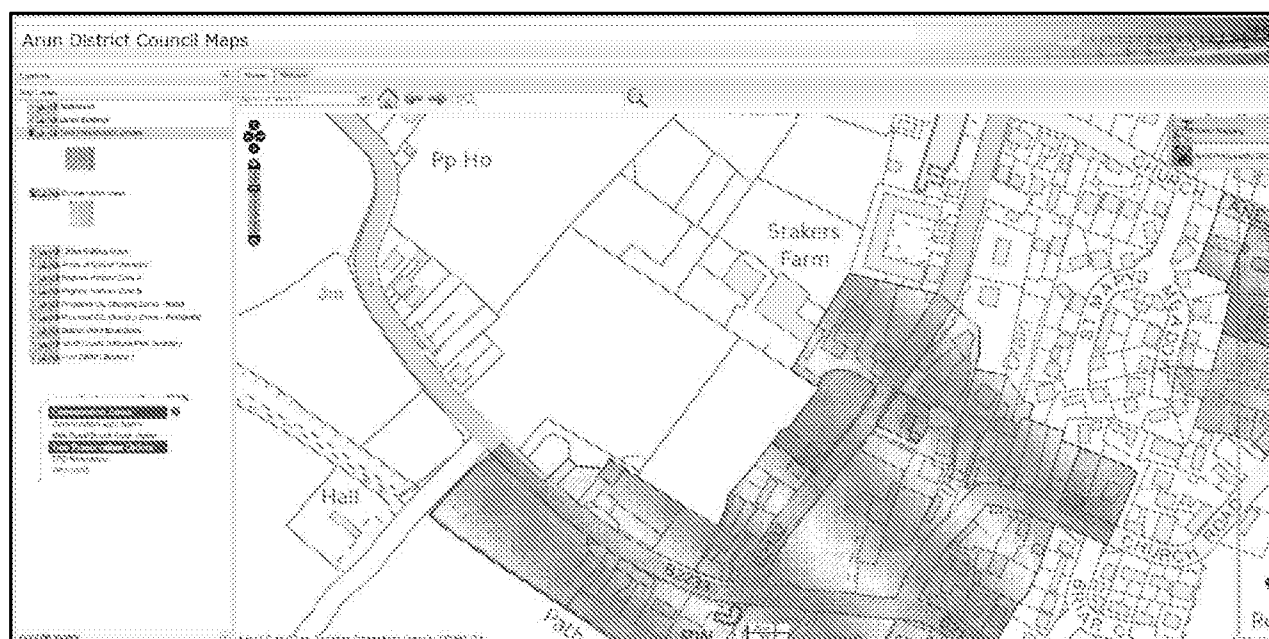


Figure 1: Map showing tree preservation and conservation areas

- 2.5. The Tree Reference Plan is based on the supplied topographical ground survey by Stuart Bailey Land Surveyor, dated August 2016, ref: 1651/01A
- 2.6. The controlling authority is Arun District Council, who can be contacted at: Civic Centre, Planning Services, Maltravers Road, Littlehampton, BN17 5LF, Tel: 01243 863141.
- 2.7. Any questions relating to the content of this report should be directed in the first instance to: ACD Environmental, Courtyard House, Mill Lane, Godalming, Surrey GU7 1EY, 01483 425714, quoting the site address and report reference number.

3.0 Scope and Method of Survey

- 3.1. The survey schedule can be found at Appendix 2.
- 3.2. The survey has been carried out following the recommendations of The British Standard and the trees are assessed objectively and without reference to any site layout proposals. Categories are based on each tree's health and condition, together with an assessment of its life expectancy if its surroundings were to be unchanged.
- 3.3. No discussions took place between the surveyor and any other party.
- 3.4. The reference numbers of surveyed trees and groups of trees are shown on the tree reference plan, which is appended to this report and based on the supplied survey drawing. The prefix G has been used to indicate a group of trees, and H for hedges. Stem locations within groups may be estimated, and indicative of canopy only.
- 3.5. The tree survey was carried out from ground level only, with the aid of binoculars as necessary, following the VTA tree assessment method².
- 3.6. Where trees are located on neighbouring land an estimated appraisal has been made of their quality and dimensions. All estimated dimensions are noted in the schedule comments.
- 3.7. Where stems or branches are obscured by ivy or other materials a full assessment of those parts will not be possible.
- 3.8. Tree heights were measured with a clinometer, or estimated in relation to those measured with the clinometer. If individual tree heights are of particular concern, for example in shading calculations, then they are measured using a clinometer.
- 3.9. Trunk diameters were measured or, where inaccessible, estimated. Single stemmed trees are measured at 1.5m above ground level.

² Mattheck, C. & Breloer, H., 1998. *The Body Language of Trees: A Handbook for Failure Analysis*. London:H.M.S.O.

- 3.10. Tree canopies, where markedly asymmetrical, were measured (or estimated by pacing) in four directions using a laser measure. Symmetrical canopies are measured in one direction only, with dimensions in the remaining directions assumed to be similar. For the canopies of groups of trees, the maximum radius for each compass point is measured (more complicated groups will have further notes taken and an accurate representation will be shown on the plan).
- 3.11. Trees numbered 6, 7, 13, 15 and 30 were not plotted on the topographical survey and therefore their positions have been estimated.

4.0 Discussion

- 4.1. For individual details of the subject trees see the survey at appendix 2.
- 4.2. The site comprises two open grass fields measuring about 3.2 hectares, separating the fields is a maintained hedge. All the data collected where of trees off site apart from two individual trees and two hedges. The site can be seen ringed in blue on the aerial photograph below:



Figure 2: Site outline courtesy of Google Earth

- 4.3. No soil assessment was carried out at the time of survey. According to the British Geological Survey online viewer, the bedrock geology is described as: Lewes Nodular Chalk Formation, Seaford Chalk Formation, Newhaven Chalk Formation, Culver Chalk Forma.
- 4.4. Three of the trees included in the survey are category A. These are all trees with high individual quality and landscape value.

- 4.5. Seven individual trees are category B: those that might be included in the high category, but are downgraded because of impaired condition (e.g. presence of significant though remediable defects, including unsympathetic past management and minor storm damage)
- 4.6. There are thirty-one individual trees and two groups that are category C: either due to their low inherent value due to low overall physiological vigour, or structural faults, or their diameter is less than 150mm at 1.5m above ground level.
- 4.7. Where there are category C trees near the boundaries of the site, it is recommended that these are retained where they have landscape value as screening.
- 4.8. There are three individual category U trees on the site which could be removed as good arboricultural practice as part of any development.
- 4.9. The below ground constraints posed by the trees are represented by root protection areas (RPAs) and shown on the Tree Reference Plan. The RPA of a tree is calculated as advised by the British Standard. For a tree growing in an apparently unconstrained rooting environment a circular RPA is shown. When constraints to root growth appear to be present the RPA is adjusted to reflect the likely root growth pattern.



Figure 3: overview looking north west of the site showing T26



Figure 4: showing offsite tree 30.



Figure 5: Showing TPO trees 19-24.

5.0 Recommendations

- 5.1. Trees of category A and B should be considered as constraints to development and every attempt should be made to incorporate them into any proposed development design. Trees of a category C are of a low value and will not usually be retained where they would impose a significant constraint to development. Category U trees are in such a condition that they will be lost within 10 years, and may be removed as good arboricultural practice.
- 5.2. The British Standard states in section 5.1.1, that the constraints imposed by trees, both above and below ground should inform the site layout design, although it is recognized that the competing needs of development mean that trees are only one factor requiring consideration. Certain trees are of such importance and sensitivity as to be major constraints on development, or to justify its substantial modification. However, care should be taken to avoid misplaced tree retention. Attempts to retain too many or unsuitable trees on a site can result in excessive pressure on the trees during demolition or construction work, or post-completion demands for their removal.

- 5.3. If the retention of higher category tree would prejudice an otherwise satisfactory design, incorporating replacement planting may provide appropriate mitigation (space for replacement trees must be included within the layout).
- 5.4. Trees can be a development constraint both below and above the ground:
- 5.4.1. Below ground: root protection areas indicate an area that contains a minimum rooting volume to ensure the survival of the tree. This area of ground should be taken into account within the site layout, such that it can be left undisturbed during demolition and construction by excluding activity from the area using protective barriers.
- 5.4.2. Tree roots can be easily damaged through root severance. For example: the excavation required for level changes, or the laying of strip foundations. They can also be damaged inadvertently through soil compaction that causes asphyxiation of roots. These factors can lead to a decline in overall vigour, die back or even whole tree death.
- 5.4.3. Above ground: tree constraints presented by the canopy and the psychological effects of tree proximity to dwellings (such as shading, perceived threat of tree failure, etc.) must also be considered during layout design. This will involve optimising site layout and building room use to avoid the end-user becoming resentful of the trees, and seeking excessive pruning or even tree removal. This is especially a consideration with trees located on southern boundaries.
- 5.4.4. Preferably, conflicts between proposed structures and RPAs and tree canopies should be 'designed out' through the careful positioning of any built form. It is therefore advisable that any design layouts are drafted in close collaboration with ACD to ensure that any trees that are highlighted for retention can be realistically integrated into the design.
- 5.5. When a final layout is agreed, an arboricultural impact assessment (AIA) should be completed to discuss arboricultural issues within the scheme, and demonstrate to the Local Planning Authority the viability of the layout.

- 5.6. Surgery may be required in order to allow trees to be retained close to structures, to allow access for construction or for future site traffic, or in the interests of the future health and safety of the trees and users of the site. Detailed recommendations for surgery can be provided once a final site layout is agreed, and it is determined which trees are to be retained. All surgery should comply with BS3998³ or more recently accepted arboricultural good practice.
- 5.7. Before any works start on site, including demolition, an arboricultural method statement (AMS) and tree protection plan (TPP) should be submitted, approved and implemented. There must be no changes in levels, service routing, machine activity, storage of materials or site hut positioning within the RPAs. The tree protection measures must remain in position for the duration of the construction process.
- 5.8. We recommend that a representative of ACD, or an alternative consultant acceptable to the local planning authority (LPA), monitor the tree protection measures throughout the development, and supervise any work within RPAs and approved protection areas.
- 5.9. Under the Hedgerows Regulations⁴ it is against the law to remove or destroy certain hedgerows without permission from the local planning authority. Local planning authority permission is required before removing hedges that are at least 20 metres (66 feet) in length, more than 30 years old and contain certain species of plant. The authority will assess the importance of the hedgerow using criteria set out in the Regulations. Hedgerows in areas covered by a historic landscape characterisation are often protected on the basis of historic importance and their wildlife value.
- 5.10. As some trees are protected by a Tree Preservation Order (TPO), consent for any required works to protected trees should be obtained from the local planning authority prior to being carried out. Consent is not required for urgent work to dead or dangerous trees, but the local planning authority should be given at least five days' notice of the intended works. Consent is not required to work on TPO trees if that work is consented as part of a full planning application. Replacement trees may be

³ BSI, 2010. *BS3998- Recommendations for Tree Work*, London: British Standards Institute.

⁴ Hedgerows Regulation 1997, SI No: 1160.

required for any protected trees that are felled. If the site is in a conservation area, six weeks' notice of works to all trees should be given.

5.11. A landowner has a duty of care⁵ to ensure that reasonable steps are taken to ensure the safety of others entering their land. There is a special responsibility to ensure the safety of children, who may be unaware of danger. Reasonably frequent inspections of trees with potential to cause harm, by a competent person, together with implementation of any recommendations, should ensure compliance with the legislation regarding tree safety.

5.12. Notice must also be taken that it is an offence⁶ to disturb a nesting bird or roosting/breeding bat. Further advice, particularly if bats are discovered during tree work should be obtained from ACD.

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Arboriculturist
12 August 2016
Revised 12th December 2019

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⁵ Occupiers' Liability Act (1957 and 1984)

⁶ Wildlife and Countryside Act (Anon., 2000) & Countryside and Rights of Way Act (Anon., 1981)

Appendix 1: Tree Categories Explained

BS5837:2012 Table 1 -Cascade chart for tree quality assessment			
Category and definition		Criteria (including subcategories where appropriate)	
Trees unsuitable for retention (see Note)			
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 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 <i>NOTE Category U trees can have existing or potential conservation value which it might be desirable to preserve; see 4.5.7.</i>	
	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
Category B Trees of moderate quality with an estimated remaining life expectancy of at least 20 years		Trees, groups or woodlands of significant conservation, historical, commemorative or other value (e.g. veteran trees or wood-pasture)	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
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 150mm		Trees with material conservation or other cultural value	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

Appendix 2: Tree Survey Schedule

No.	Name	Ht (crown)	Dia (stems)	Crown spread (NESW)	Life stage	ERC	Comments & preliminary recommendations	BS Cat
T1	Betula pendula (Silver Birch)	14(1)	400(1)	7, 4, 7, 5.5	M	20+	Off site. No obvious significant defects. Moderate quality and value. Off-site and inaccessible: diameter estimated. Growing close proximity to wall	B1
T2	Acer platanoides Crimson King (Crimson Norway Maple)	9(3.5)	220(1)	4, 4, 4, 4	M	20+	Pruning wounds on stems. Dieback in crown. Major deadwood in crown. Off-site and inaccessible: diameter estimated. Growing close proximity to wall	C1
T3	Betula pendula (Silver Birch)	14(1.5)	230,340(2)	6.5, 7, 7, 3.5	M	20+	Off site. Moderate quality and value. Ivy on stem. Off-site and inaccessible: diameter estimated. Growing close proximity to wall	B1
T4	Aesculus hippocastanum (Horse Chestnut)	6(1.5)	200(1)	2, 4, 4, 2	M	10+	Off site. Declining in health and condition. Low quality and value. Ivy on stem. Low vigour/poor extension growth. Crown distorted due to group pressure. Off-site and inaccessible: diameter estimated. Growing close proximity to wall	C1
G1	X Cupressocyparis leylandii (Leyland Cypress)	7(2)	250(1)	0.5, 5.5, 3, 2	M	10+	Off site. Low quality and value. Little wider long-term landscape value. Ivy on stem. Heavily crown reduced. Off-site and inaccessible: diameter estimated.	C1
T5	Ginkgo biloba (Maidenhair Tree)	7(4)	130(1)	3.5, 3.5, 3.5, 3.5	EM	20+	Off site. Low quality. Off-site and inaccessible: diameter estimated. competing leaders	C1
T6	Quercus ilex (Holm Oak)	7(2)	300(1)	5.5, 5.5, 2, 3	M	20+	Off site. Low quality and value. Heavily crown reduced. Off-site and inaccessible: diameter estimated. Growing close proximity to wall	C1
T7	Taxus baccata (Yew)	7(2)	200(1)	3, 3, 3, 3	M	20+	Off site. Plotted by eye on plan. Low quality and value. Heavily crown reduced. Off-site and inaccessible: diameter estimated.	C1

Notes: Dia (stems): trunk diameter in mm at 1.5m above ground level (number of stems) | HT (crown): Tree height in m (crown clearance in m) | Life stage: Y: Young (obviously planted within the last three years (unless as a heavy or extra-heavy standard)), SM: Semi-mature (recently planted and yet to attain mature stature, up to 25% of attainable age), EM: Early mature (almost full height, crown still developing and seed bearing, up to 50% of attainable age), M: Mature (full height, crown spread, seed bearing, over 50% of attainable age), OM: Over-mature (full size, die-back, small leaf size, poor growth extension) | PFB: First significant branch (% compass bearing) | ERC: Expected remaining contribution in years: <10, 10+, 20+, 40+ (assuming that there will be no physical change to its immediate environment) | BS Category: Refer to appendix 1 of this report or 655637/2012 Table 1 for detailed descriptions.

CLIENT: Seaward Properties Limited
 SITE: Bonhams Field, Yapton
 DATE: August 2016 & December 2019

SURVEYOR: Robert Anderson

TAGGED? No

No.	Name	Ht (crown)	Dia (stems)	Crown spread (NESW)	Life stage	ERC	Comments & preliminary recommendations	BS Cat
T8	X Cupressocyparis leylandii (Leyland Cypress)	7(3)	250(1)	2, 5, 6, 3	M	10+	Off site. Plotted by eye on plan. Low quality and value. Heavily crown reduced. Dieback in crown. Off-site and inaccessible: diameter estimated.	C1
T9	Fagus sylvatica (Beech)	9(1)	200(3)	2, 2, 4, 5	EM	20+	Off site. Moderate quality, but of low value due to small size. Off-site and inaccessible: diameter estimated. end tree in hedgerow that's been topped and now re-grown	C1
T10	Juglans regia (Walnut)	7(1)	190(1)	4.5, 2, 1, 4.5	EM	20+	Off site. Fair quality with some landscape value. Crown distorted due to group pressure. Off-site and inaccessible: diameter estimated.	C1
T11	Malus (Apple)	4(2)	170(1)	3, 3, 3, 2	M	10+	Off site. Low quality and value. Off-site and inaccessible: diameter estimated. ivy smothering crown	C1
T12	Crataegus monogyna (Hawthorn)	3.5(2)	150(1)	0.5, 2, 3.5, 2.5	EM	<10	Leaning South-West. Low quality and value. Ivy in crown. One sided crown: supressed by adjacent specimen. Off-site and inaccessible: diameter estimated. original planting stock, rest of hedge been removed or reduced	U
T13	Prunus cerasifera (Cherry Plum)	5(3)	450(1)	2.5, 2.5, 2.5, 2.5	OM	10+	Off site. Plotted by eye on plan. Location estimated. Poor shape and form. Low quality and value. Heavily crown reduced- now regrown. Diameter is an estimated maximum.	C1
T14	Fagus sylvatica (Beech)	5(1)	170(1)	3, 3, 3, 3	SM	20+	Plotted by eye on plan. Low quality and value. Off-site and inaccessible: diameter estimated. small tree growing within off site garden	C2
T15	Betula pendula (Silver Birch)	12(2)	170(1)	0.5, 2, 4.5, 4.5	EM	20+	Off site. Plotted by eye on plan. Crown distorted due to group pressure. Off-site and inaccessible: diameter estimated.	C1

Notes: Dia (stems): trunk diameter in mm at 1.5m above ground level (number of stems) | HT (crown): Tree height in m (crown clearance in m) | Life stage: Y: Young (obviously planted within the last three years (unless as a heavy or extra-heavy standard)), SM: Semi-mature (recently planted and yet to attain mature stature, up to 25% of attainable age), EM: Fully mature (almost full height, crown still developing and seed bearing, up to 50% of attainable age), M: Mature (full height, crown spread, seed bearing, over 50% of attainable age), OM: Over-mature (full size, de-back, small tree size, poor growth extension) | PDB: Plot dominant branch (% compass bearing) | ERC: Expected remaining contribution in years: <10, 10+, 20+, 40+ (assuming that there will be no physical change to its immediate environment) | BS Category: Refer to appendix 1 of this report or 655637/2012 Table 1 for detailed descriptions.

Page | 17

CLIENT: Seaward Properties Limited
 SITE: Bonhams Field, Yapton
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SURVEYOR: Robert Anderson

TAGGED? No

No.	Name	Ht (crown)	Dia (stems)	Crown spread (NESW)	Life stage	ERC	Comments & preliminary recommendations	BS Cat
T16	Prunus spp (Cherry)	10(2)	230(3)	2, 4, 5, 5	M	20+	Off site. Low quality and value. Crown distorted due to group pressure. Off-site and inaccessible: diameter estimated. multi stemmed at 1.5m	C1
T17	Fagus sylvatica (Beech)	11(1)	310(1)	5.5, 3, 3, 5	EM	40+	Off site. Fair quality with some landscape value. Off-site and inaccessible: diameter estimated.	B1
T18	Acer platanoides (Norway Maple)	7(2)	450(1)	3.5, 3.5, 3.5, 3.5	OM	<10	Off site. Off-site and inaccessible: diameter estimated. tree has collapsed at 3.5m from main stem. eppi growth present	U
T19	Acer pseudoplatanus (Sycamore)	17(2)	750(1)	7.5, 7.5, 8, 8	M	40+	Off site. No obvious significant defects. Fair quality with some landscape value.	A2
T20	Acer platanoides (Norway Maple)	18(2)	880(1)	9, 8, 5, 8	M	20+	Off site. historic branch rip out wound on East side with significant decay present	B2
T21	Acer pseudoplatanus (Sycamore)	10(3)	280(1)	5, 5, 5, 5	EM	20+	Off site. Plotted by eye on plan. Low quality and value. Crown distorted due to group pressure.	C2
T22	Acer platanoides (Norway Maple)	18(3)	790(1)	8.5, 8, 8, 8	M	40+	Off site. No obvious significant defects. historic light pruning on west side.	A2
T23	Acer platanoides (Norway Maple)	10(2)	540(1)	7, 7, 3, 7	M	20+	Off site. Cavity on stem. significantly one-sided crown from historic neighbour	B2
T24	Acer pseudoplatanus (Sycamore)	18(3)	830(1)	7, 7, 4, 7	M	20+	Off site. One sided crown: suppressed by adjacent specimen.	B2
T25	Crataegus monogyna (Hawthorn)	4(1)	280(1)	4, 4, 4, 4	OM	10+	Low quality and value. Diameter estimated due to lower growth.	C1
H1	Crataegus monogyna (Hawthorn), Sambucus nigra (Elder)	3(0)	150(1)	0.5, 0.5, 0.5, 0.5	M	20+	Diameter estimated. regularly maintained dense hedge comprising of 95% hawthorn and 5% elder.	0
H2	Crataegus monogyna (Hawthorn), Sambucus nigra (Elder)	3.5(0)	150(1)	0.5, 0.5, 0.5, 0.5	M	20+	Provides some screen. Diameter estimated. dense regularly maintained boundary hedge providing some screening into site	0

Notes: Dia (stems): trunk diameter in mm at 1.5m above ground level (number of stems) | HT (crown): Tree height in m (crown clearance in m) | Life stage: Y: Young (obviously planted within the last three years (unless as a heavy or extra-heavy standard)), SM: Semi-mature (recently planted and yet to attain mature stature, up to 25% of attainable age), EM: Fully mature (almost full height, crown still developing and seed bearing, up to 50% of attainable age), M: Mature (full height, crown spread, seed bearing, over 50% of attainable age), OM: Over-mature (full size, de-back, small tree size, poor growth extension) | FBB: Flat significant branch (% compass bearing) | ERC: Expected remaining contribution in years: <10, 10+, 20+, 40+ (assuming that there will be no physical change to its immediate environment) | BS Category: Refer to appendix 1 of this report or 655637.2012 Table 1 for detailed descriptions.

Page | 18

CLIENT: Seaward Properties Limited
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TAGGED? No

No.	Name	Ht (crown)	Dia (stems)	Crown spread (NESW)	Life stage	ERC	Comments & preliminary recommendations	BS Cat
T26	Cupressus macrocarpa (Monterey Cypress)	12(2)	1050(1)	8, 8, 8, 8	OM	<10	Sparse foliage. Major deadwood in crown. Off-site and inaccessible: diameter estimated. significant dieback in crown amounting to about 15% of original crown remaining	U
T27	Acer platanoides Crimson King (Crimson Norway Maple)	8(3)	290(1)	5, 5, 5, 5	M	40+	Off site. Moderate quality and value. Off-site and inaccessible: diameter estimated.	B1
T28	Acer platanoides (Norway Maple)	8.5(3)	290(1)	5.5, 5.5, 5.5, 5.5	M	10+	Off site. Low quality and value. Off-site and inaccessible: diameter estimated. dense ivy engrossing into crown	C1
T29	Sambucus nigra (Elder)	4(0)	200(1)	3, 3, 3, 3	M	10+	Off site. Low quality and value. Off-site and inaccessible: diameter estimated.	C1
G2	Acer platanoides Crimson King (Crimson Norway Maple),Acer platanoides (Norway Maple),Crataegus monogyna (Hawthorn),Acer negundo (Box Elder),Sambucus nigra (Elder)	9(0)	250(1)	3.5, 3.5, 3.5, 3.5	M	10+	Off site. Moderate quality and value. Ivy in crown. Diameter estimated. dimensions are as shown on plan	C2
T30	Quercus robur (Common Oak)	18(4)	670(1)	12, 12, 12, 12	M	40+	Inaccessible. Off site. Plotted by eye on plan. No obvious significant defects. Off-site and inaccessible: diameter estimated.	A1
H3	Ligustrum vulgaris (Privet),Crataegus monogyna (Hawthorn),Sambucus nigra (Elder)	3.5(0)	160(1)	0.5, 0.5, 0.5, 0.5	M	20+	Diameter estimated. regular maintained boundary hedge with screening value to neighbouring property. ownership is unclear	0
T32	Pinus radiata (Monterey Pine)	15(3)	410(1)	1.5, 1.5, 2.5, 3	M	20+	Off site. Pruning wounds on stems. Crown distorted due to group pressure. Off-site and inaccessible: diameter estimated.	C1
T33	Acer pseudoplatanus (Sycamore)	10(2)	200(5)	5, 5.5, 5, 5	M	20+	Off site. Low quality and value. Off-site and inaccessible: diameter estimated. multi stemmed at 1m	C1

Notes: Dia (stems): trunk diameter in mm at 1.5m above ground level (number of stems) | HT (crown): Tree height in m (crown clearance in m) | Life stage: Y: Young (obviously planted within the last three years (unless as a heavy or extra-heavy standard)), SM: Semi-mature (recently planted and yet to attain mature stature, up to 25% of attainable age), EM: Fully mature (almost full height, crown still developing and seed bearing, up to 50% of attainable age), M: Mature (full height, crown spread, seed bearing, over 50% of attainable age), OM: Over-mature (full size, die-back, small leaf size, poor growth extension) | FBB: First significant branch (% compass bearing) | ERC: Expected remaining contribution in years: <10, 10+, 20+, 40+ (assuming that there will be no physical change to its immediate environment) | BS Category: Refer to appendix 1 of this report or 655637/2012 Table 1 for detailed descriptions.

Page | 19

CLIENT: Seaward Properties Limited
 SITE: Bonhams Field, Yapton
 DATE: August 2016 & December 2019

SURVEYOR: Robert Anderson

TAGGED? No

No.	Name	Ht (crown)	Dia (stems)	Crown spread (NESW)	Life stage	ERC	Comments & preliminary recommendations	BS Cat
T34	Carpinus betulus (Hornbeam)	5.5(2)	120(1)	2, 2, 2, 2	SM	40+	Off site. No obvious significant defects. Off-site and inaccessible: diameter estimated.	C1
T35	Carpinus betulus (Hornbeam)	7(1)	110(1)	1.5, 1.5, 1.5, 1.5	EM	40+	Off site. No obvious significant defects. Off-site and inaccessible: diameter estimated.	C1
T36	Carpinus betulus (Hornbeam)	5(0.5)	130(1)	2, 2, 2, 2	EM	40+	Off site. No obvious significant defects. Off-site and inaccessible: diameter estimated.	C1
T37	Quercus robur (Common Oak)	7(3)	130(1)	2, 2, 2, 2	EM	40+	Off site. No obvious significant defects. Off-site and inaccessible: diameter estimated.	C1
T38	Fagus sylvatica (Beech)	7(0.5)	150(1)	1.5, 1.5, 1.5, 1.5	EM	40+	Off site. No obvious significant defects. Off-site and inaccessible: diameter estimated.	C1
T39	Betula pendula (Silver Birch)	8(2.5)	140(1)	2, 2, 2, 2	EM	40+	Off site. No obvious significant defects. Off-site and inaccessible: diameter estimated.	C1
T40	Quercus robur (Common Oak)	7(3)	200(1)	3, 3, 3, 3	EM	40+	Off site. No obvious significant defects. Off-site and inaccessible: diameter estimated.	C1
T41	Aesculus carnea (Red Horse Chestnut)	5.5(2)	120(1)	1.5, 1.5, 1.5, 1.5	SM	40+	Off site. No obvious significant defects. Off-site and inaccessible: diameter estimated.	C1
T42	Quercus Spp (Oak)	5.5(2)	110(1)	2.5, 2.5, 2.5, 2.5	EM	40+	Off site. No obvious significant defects. Off-site and inaccessible: diameter estimated.	C1
T43	Aesculus carnea (Red Horse Chestnut)	5(2)	130(1)	1.5, 1.5, 1.5, 1.5	EM	40+	Off site. No obvious significant defects. Off-site and inaccessible: diameter estimated.	C1
T44	Liquidambar styraciflua (Sweet Gum)	4.5(2)	110(1)	2, 2, 2, 2	EM	40+	Off site. No obvious significant defects. Off-site and inaccessible: diameter estimated.	C1
T45	Fagus sylvatica (Beech)	5.5(1)	110(1)	1, 1, 1, 1	SM	40+	Off site. No obvious significant defects. Off-site and inaccessible: diameter estimated.	C1

Notes: Dia (stems): trunk diameter in mm at 1.5m above ground level; number of stems | HT (crown): Tree height in m (crown clearance in m) | Life stage: Y: Young (obviously planted within the last three years (unless as a heavy or extra-heavy standard); SM: Semi-mature (recently planted and yet to attain mature stature; up to 25% of attainable age); EM: Early mature (almost full height, crown still developing and seed bearing; up to 50% of attainable age); M: Mature (full height, crown spread, seed bearing; over 50% of attainable age); OM: Over-mature (full size, de-back, small test size, poor growth extension); PDB: Flat significant branch (% compass bearing) | ERC: Expected remaining contribution in years: <10, 10+, 20+, 40+ (assuming that there will be no physical change to its immediate environment) | BS Category: Refer to appendix 1 of this report or 655637.2012 Table 1 for detailed descriptions.

Page | 10

Appendix 3: Tree Reference Plan

SEA20727-01

How to use this plan

This plan follows the recommendations of BS5837:2012 and provides sufficient information for designers to interpret the constraints presented by the trees on and around the site. If there are any questions about how to correctly interpret the details shown, then ACD should be contacted on 01453425714 or mail@acdenv.co.uk

This plan is for design use. Before making a planning application, ACD should assess the impact of the layout and draft a full arboricultural impact assessment (AIA)

Designers should seek to retain all A & B category trees, and work within the constraints posed by them, as the LPA will expect their retention. C category trees should not be a material constraint trees and may be removed to facilitate development. However, their retention should be sought where practical, but the scheme need not be designed around them.

Developable area

Root protection area (RPA) for A & B category trees
The minimum area around a tree deemed to contain sufficient roots and rooting volume to maintain the tree's viability, and where the protection of the roots and soil structure is treated as a priority. BS5837:2012 advises that default position is that structures & surfaces are located outside this area. However, where there is an overriding justification for construction within the RPA, technical solutions might be available that prevent damage to the tree(s). It is essential that you contact ACD to discuss any proposals within this area before finalising a design.

RPA for C category trees

Note: Future growth area

Any layout design should only site small non-habitable buildings (garages, cycle stores, etc) within 2 m of tree canopies. In addition to providing space or the tree's growth, this also allows for the working and access space needed for the construction of the buildings. In some instances it may be viable to carry out some pruning but his often raises objections from LPAs and therefore ACD should be consulted on any proposals to prune, or site buildings in this area, before finalising any design

Shading
The design should also avoid unreasonable obstruction of light, by siting buildings so that only flank walls and/or non-habitable/aspect rooms are close to retained trees. Gardens should be orientated to provide some shade free areas during the day.

Tree categories

- A category tree- high quality**
- B category tree- moderate quality**
- C category tree-low quality**
- U category tree- less than 10 years useful life**

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

0 5 10 15 20 25m

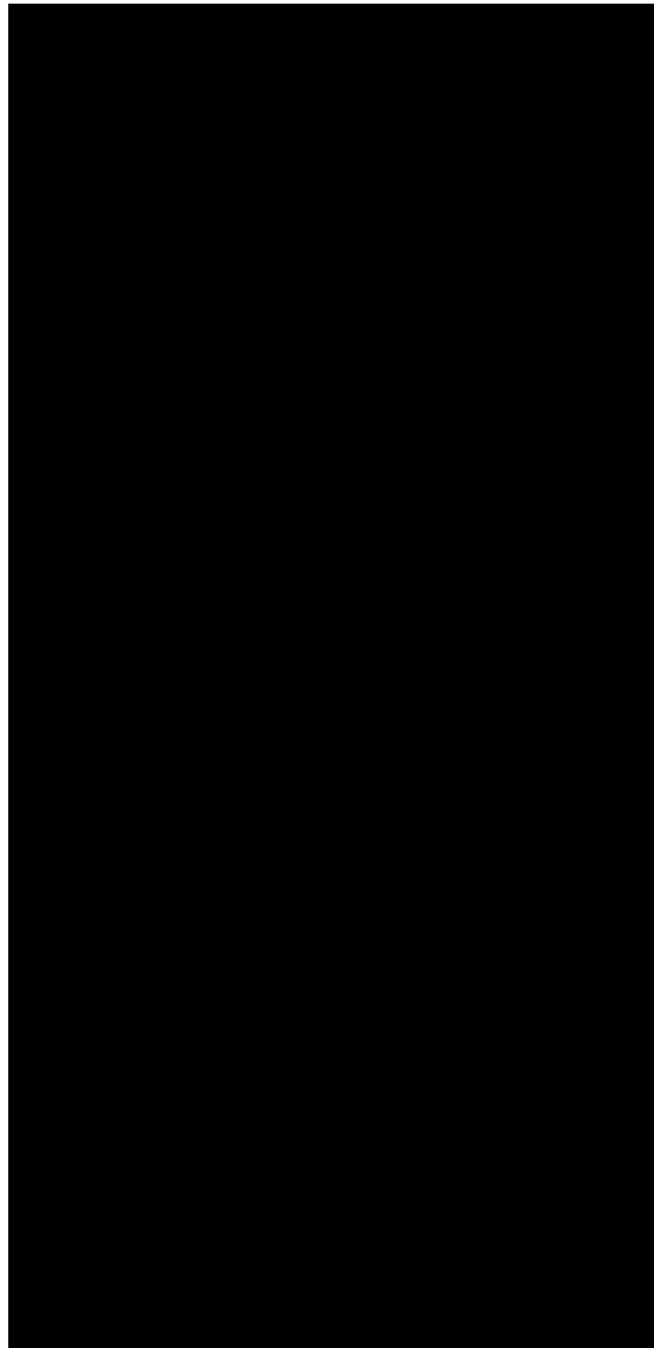
A 12.12.19 Revised site data following survey in Dec 19: RA
Rev Date Details Drawn



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scheme: Bonhams Field
Yapton
client: Seaward Properties Limited
drawing: Tree Reference Plan
date: August 2016
scale: 1:500@A1
dwg no: SEA20727-01A
drawn: RA checked: MW



**ECOLOGICAL SURVEYS * PROTECTED SPECIES LICENSING * MITIGATION * IMPACT ASSESSMENT
ARBORICULTURAL SITE MONITORING AND SUPERVISION * ARCHAEOLOGY
LANDSCAPE & VISUAL IMPACT ASSESSMENT * LANDSCAPE AUDIT * PROJECT MANAGEMENT
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