

FORMER
PLAYING FIELDS
STAKES ROAD
PURBROOK

TREE REPORT

(Tree Survey and
Constraint Advice)

Prepared by
ACD Arboriculture

for



PERSIMMON
Together, we make a home

ACD

Ecology

Archaeology

Arboriculture

Landscape Architecture

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Checked By:	C Price
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1. Executive Summary

- 1.1. This report provides survey information about the trees on the site at the Former Playing Fields, Stakes Road, Purbrook, 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 thirty trees and three groups were included within the survey. Three trees were graded as category A, eight (and two groups) as B and eighteen (and one group) as C.
- 1.3. Two tree preservation orders cover four trees within the survey area. Two limes T26 & T27, the large wellingtonia T19 and the hemlock T6.
- 1.4. There is one category U tree on the site that could be removed as good arboricultural practice, regardless of any development.
- 1.5. 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.

2. Introduction

- 2.1. ACD Arboriculture were instructed by Persimmon Homes (South Coast), in March 2015, to survey and categorize the trees at the Former Playing Fields, Stakes Road, Purbrook, in accordance with the British Standard¹. 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 woodlands 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. Two tree preservation orders cover four trees within the survey area. Two limes T26 & T27, the large wellingtonia T19 and the hemlock T6.
- 2.5. The Tree Reference Plan is based on the supplied topographical ground survey, ref: 11PP001, by Siteline, dated January 2015.
- 2.6. The controlling authority is Havant Borough Council, who can be contacted at: Civic Centre Road, Havant, Hampshire PO9 2AX, Tel: (023) 9247 4174.
- 2.7. Any questions relating to the content of this report should be directed in the first instance to: ACD Arboriculture, Courtyard House, Mill Lane, Godalming, Surrey GU7 1EY, 01483 425714, quoting the site address and report reference number.

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

3. Scope and Method of Survey

- 3.1. The survey has been carried out in accordance with 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. An explanation of the categories can be found at appendix 1.
- 3.2. No discussions took place between the surveyor and any other party.
- 3.3. The reference numbers of surveyed trees and groups of trees are shown on the Tree Reference Plan, which is based on the supplied survey drawing and appended to this report. 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.
- 3.4. The tree survey was carried out from ground level only with the aid of binoculars as necessary, following the VTA tree assessment method².
- 3.5. Where trees are located on neighbouring land an estimated appraisal has been made of their quality and dimensions.
- 3.6. Where stems or branches are obscured by ivy or other materials a full assessment of those parts will not be possible.
- 3.7. Tree heights were measured with a clinometer, or estimated in relation to those measured.
- 3.8. Trunk diameters were measured or, where inaccessible, estimated. Single stemmed trees are measured at 1.5m from ground level. Multiple stemmed trees are measured according to section 4.6 of the British Standard. For groups of trees the diameter may be an estimated average or a maximum.
- 3.9. 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. The canopy of tree groups will be indicated by measuring the maximum canopy radius for each compass point (more complicated groups will have further notes taken and an accurate representation will be shown on the plan).

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

4. Discussion

- 4.1. For individual details of the subject trees see the survey at appendix 2.
- 4.2. The site is a former playing field covering approximately 7230m². It is a remnant of a larger field site, most of which has now been developed with residential housing.
- 4.3. Three of the trees included in the survey are category A. These are all trees with high individual quality and landscape value. One of these is outside the site boundary.
- 4.4. Eight individual trees and two groups 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)
- 4.5. There are eighteen individual trees and one group 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.
- 4.6. 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.
- 4.7. 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 1: Northern boundary



Figure 2: NE corner G1 and T1 & T2



Figure 3: Off-site category A Wellingtonia T19

5. 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.
- 5.5. 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.

- 5.6. 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. Notice must also be taken that it is an offence⁴ to disturb a nesting bird or roosting/breeding bat. Further advice, particularly if bats are discovered during tree work should be obtained from ACD.

Mark Welby Tech Cert (ArborA), Dip Arb (RFS), FARborA
Director
7th April 2015



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

⁴ Wildlife and Countryside Act (Anon., 2000) & Countryside and Rights of Way Act (Anon., 1981)

Appendix 1: Summary of Categories BS5837:2012

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

SITE: Former Playing Fields, Stakes Road, Purbrook
CLIENT: Persimmon Homes (South Coast)
DATE: April 2015

SURVEYOR: M Welby Dip Arb(RFS) FArborA

TAGGED? No

Appendix 2: Tree Survey Schedule

No.	Name	Ht (crown)	Dia (stems)	Canopy spread N E S W				Life stage	ERC	Comments & preliminary recommendations	BS Cat
T1	Lawson Cypress (Chamaecyparis lawsoniana)	21.5 (3)	490 (1)	As	shown	on	plan	M	10+	Tall but sparse.	C1
T2	Sycamore (Acer pseudoplatanus)	20 (5)	770 (1)	As	shown	on	plan	M	20+	No obvious significant defects. Fair tree of moderate quality and value. Ivy on stem.	B1
T3	Sycamore (Acer pseudoplatanus)	17 (2)	490 (1)	As	shown	on	plan	M	10+	No obvious significant defects. One sided and competing with larger adjacent tree. Recommendations: Remove two lowest branches/stubs if retained.	C1
T4	Sycamore (Acer pseudoplatanus)	12 (2)	300 (1)	As	shown	on	plan	M	10+	Diameter estimated. Inaccessible. Poor shape and form. Weak and suppressed. Ivy on stem.	C1
T5	Hawthorn (Crataegus monogyna)	7 (1)	270 (1)	As	shown	on	plan	M	<10	Diameter estimated. Inaccessible. Poor shape and form. Declining. Recommendations: Remove tree prior to development.	U
T6 TPO 1440: T9	Western Hemlock (Tsuga heterophylla)	18.5 (7)	550 (1)	As	shown	on	plan	EM	20+	Off site and inaccessible. Diameter estimated. No obvious significant defects. Fair tree of moderate quality and value.	B1
T7	Cherry Laurel (Prunus laurocerasus)	10 (2)	150 (3)	As	shown	on	plan	M	10+	Off site and inaccessible. Diameter estimated. Boundary screen.	C1
T8	Cherry Laurel (Prunus laurocerasus)	10 (2)	150 (3)	As	shown	on	plan	M	10+	Off site and inaccessible. Diameter estimated. Boundary screen.	C1
T9	Cherry Laurel (Prunus laurocerasus)	10 (2)	150 (3)	As	shown	on	plan	M	10+	Inaccessible. Boundary screen.	C1

Notes: **Dia (stems):** trunk diameter in mm at 1.5m above ground level (number of stems) | **HT (crown):** Tree height (crown clearance) | **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.). | **FSB:** First significant branch (& compass bearing) | **ERC:** Expected remaining contribution in years- <10, 10+, 20+, 40+ (assuming that there will be no physical changes to its immediate environment.) | **BS Category:** Refer to appendix 1 of this report or BS5837:2012 Table 1 for detailed descriptions.

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No.	Name	Ht (crown)	Dia (stems)	Canopy spread N E S W				Life stage	ERC	Comments & preliminary recommendations	BS Cat
T10	Hawthorn (Crataegus monogyna)	8 (1)	300 (1)	As	shown	on	plan	M	10+	Diameter estimated. Inaccessible. Heavily ivy clad. Recommendations: Sever Ivy.	C1
T11	Holly (Ilex aquifolium)	7 (0.5)	180 (1)	As	shown	on	plan	M	10+	Diameter estimated. Inaccessible. Small with limited current landscape value. Provides some screen.	C1
T12	Sycamore (Acer pseudoplatanus)	13.5 (0.5)	470 (1)	As	shown	on	plan	M	10+	Very swept lower stem (to south).	C1
T13	Sycamore (Acer pseudoplatanus)	15.5 (1.5)	300 (4)	As	shown	on	plan	M	20+	Single stem. No obvious defects.	B1
T14	Holly (Ilex aquifolium)	5 (0.5)	240 (1)	As	shown	on	plan	M	10+	Plotted by eye on plan. No obvious significant defects. Small with limited current landscape value. Provides some screen.	C1
T15	Hawthorn (Crataegus monogyna)	6 (0.5)	180 (3)	As	shown	on	plan	EM	10+	Declining. Recommendations: Remove tree prior to development.	C1
T16	Yew (Taxus baccata)	6 (1)	140 (1)	As	shown	on	plan	SM	10+	Diameter estimated. Small with limited current landscape value.	C1
T17	Sycamore (Acer pseudoplatanus)	22 (2)	880 (1)	As	shown	on	plan	M	40+	No obvious significant defects. Good quality with high landscape value. Regrown pollard.	A1
T18	Small-leaved Lime (Tilia cordata)	20 (2)	750 (1)	As	shown	on	plan	M	20+	Off site and inaccessible. Diameter estimated. Fair quality with some landscape value. Exudation on stem.	B1
T19 TPO 1440: T3	Wellingtonia (Sequoiadendron giganteum)	25 (8)	1100 (1)	As	shown	on	plan	M	40+	Off site and inaccessible. Diameter estimated. Good quality with high landscape value.	A1

Notes: **Dia (stems):** trunk diameter in mm at 1.5m above ground level (number of stems) | **HT (crown):** Tree height (crown clearance) | **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.). | **FSB:** First significant branch (& compass bearing) | **ERC:** Expected remaining contribution in years- <10, 10+, 20+, 40+ (assuming that there will be no physical changes to its immediate environment.) | **BS Category:** Refer to appendix 1 of this report or BS5837:2012 Table 1 for detailed descriptions.

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No.	Name	Ht (crown)	Dia (stems)	Canopy spread N E S W				Life stage	ERC	Comments & preliminary recommendations	BS Cat
T20	Holly (Ilex aquifolium)	6.5 (0.5)	160 (1)	As	shown	on	plan	M	10+	Off site and inaccessible. Diameter estimated. No obvious significant defects. Small with limited current landscape value. Provides some screen.	C1
T21	Holly (Ilex aquifolium)	6.5 (0.5)	160 (1)	As	shown	on	plan	M	10+	Off site and inaccessible. Diameter estimated. No obvious significant defects. Small with limited current landscape value. Provides some screen.	C1
T22	Yew (Taxus baccata)	8 (0.5)	400 (1)	As	shown	on	plan	M	20+	Off site and inaccessible. Diameter estimated. No obvious significant defects. Fair tree of moderate quality and value.	B1
T23	Common Lime (Tilia X europaea)	24 (0.5)	690 (1)	As	shown	on	plan	M	40+	No obvious significant defects. Good quality with high landscape value. Typical epicormic growth at base.	A1
T24	Chinese Plum Yew (Cephalotaxus fortunei)	6 (0.5)	200 (1)	As	shown	on	plan	M	10+	Plotted by eye on plan. Off site and inaccessible. Diameter estimated. Small with limited current landscape value.	C1
T25	Sycamore (Acer pseudoplatanus)	16.5 (3)	250 (1)	As	shown	on	plan	EM	10+	Off site and inaccessible. Diameter estimated. Tall and narrow.	C1
T26 TPO 2018: G1	Common Lime (Tilia X europaea)	19 (1)	830 (1)	As	shown	on	plan	M	20+	No obvious significant defects. Fair quality with some landscape value. Unbalanced crown shape. Recommendations: Crown lift to 5m.	B1
T27 TPO 2018: G1	Common Lime (Tilia X europaea)	17 (3)	910 (1)	As	shown	on	plan	M	20+	Fair quality with some landscape value. Reduced to 6m and regrown.	B1
T28	Ash (Fraxinus excelsior)	10 (4)	500 (1)	As	shown	on	plan	M	20+	Off site and inaccessible. Diameter estimated. Somewhat stunted.	B1
T29	Horse Chestnut (Aesculus hippocastanum)	11 (2.5)	480 (1)	As	shown	on	plan	M	10+	Street tree: on verge. Surface roots and some bark exudations.	C1

Notes: **Dia (stems):** trunk diameter in mm at 1.5m above ground level (number of stems) | **HT (crown):** Tree height (crown clearance) | **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.). | **FSB:** First significant branch (& compass bearing) | **ERC:** Expected remaining contribution in years- <10, 10+, 20+, 40+ (assuming that there will be no physical changes to its immediate environment.) | **BS Category:** Refer to appendix 1 of this report or BS5837:2012 Table 1 for detailed descriptions.

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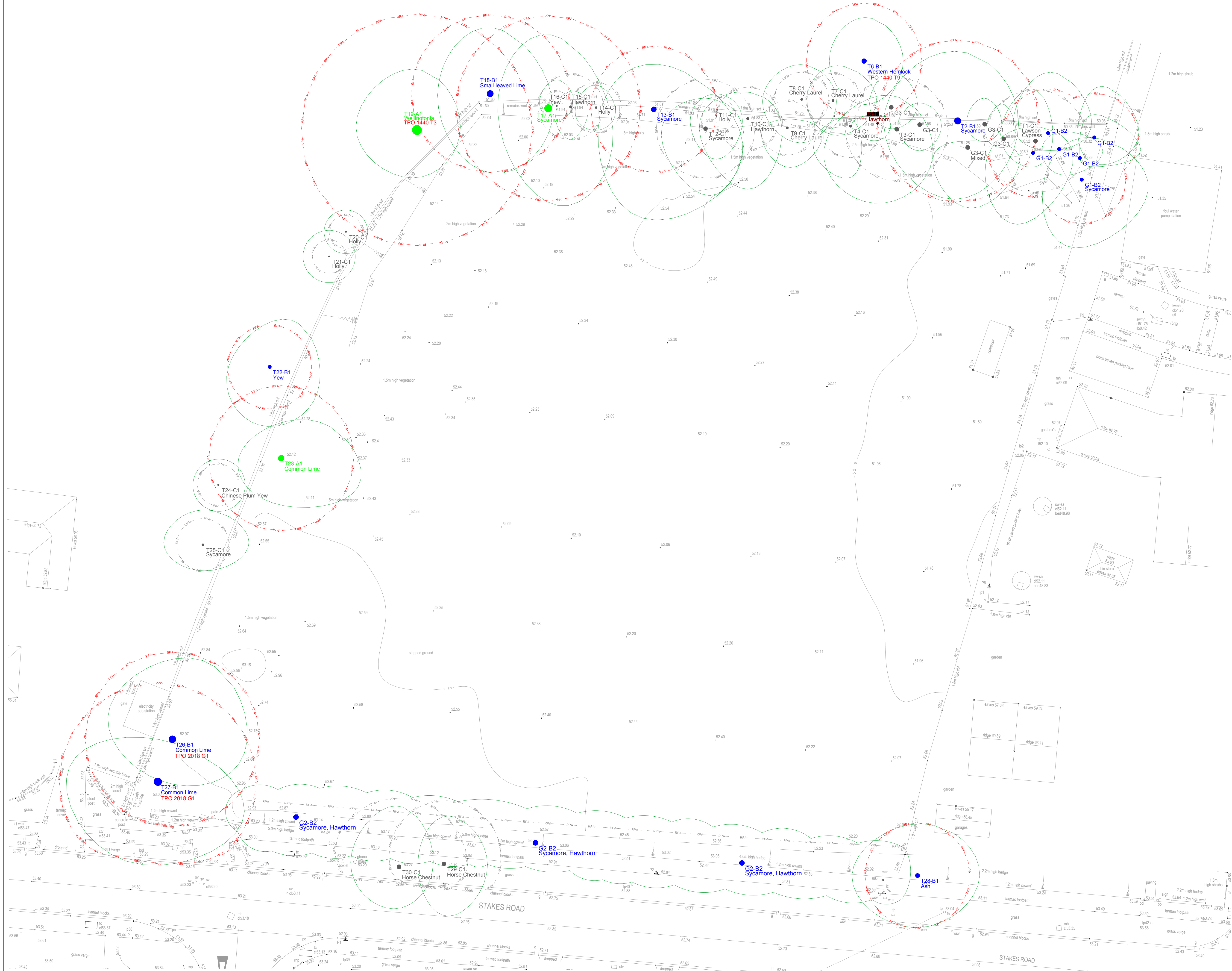
SURVEYOR: M Welby Dip Arb(RFS) FArborA

TAGGED? No

No.	Name	Ht (crown)	Dia (stems)	Canopy spread N E S W				Life stage	ERC	Comments & preliminary recommendations	BS Cat
T30	Horse Chestnut (Aesculus hippocastanum)	11 (2.5)	510 (1)	As	shown	on	plan	M	10+	Street tree: on verge. Surface roots and some bark exudations. Small burrs throughout crown. Some bark cracking on lower stem.	C1
G1	Sycamore (Acer pseudoplatanus)	16.5 (2)	420 (1)	As	shown	on	plan	M	20+	No obvious significant defects. Ivy on stem. Group of category C trees with greater collective landscape value.	B2
G2	Sycamore, Hawthorn (Acer pseudoplatanus, Crataegus monogyna)	8 (0.5)	170 (1)	As	shown	on	plan	EM	20+	Boundary hedge. Recommendations: Remove sycamore and top hawthorn to 3m to formalise hedge.	B2
G3	Sycamore, Hawthorn (Acer pseudoplatanus, Crataegus monogyna)	8 (0.5)	180 (1)	As	shown	on	plan	EM	10+	Mixed understorey group. Diameter estimated	C1

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Appendix 3: Tree Reference Plan



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 01483425714 or mail@acdarb.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

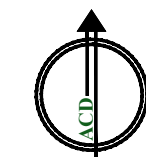
Any layout design should only site small non-habitable buildings (garages, cycle stores, etc) within 2 m of tree canopies. In addition to providing space for the tree's growth, this also allows for the working and access space needed for the construction of the buildings. In some instances it may be 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/dual 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 1 2 3 4 5 10m

Rev Date Details Drawn

ACD

Ecology
Archaeology
Arboriculture
Landscape Architecture

Redbourne Rail Business Centre,
Grange Lane, Malmesbury, Wilts, SN16 0ES
Tel: 01666 825646 Fax: 01666 824654

Courtyard House, Mill Lane
Godalming, Surrey, GU7 1EY
Tel: 01483 425714

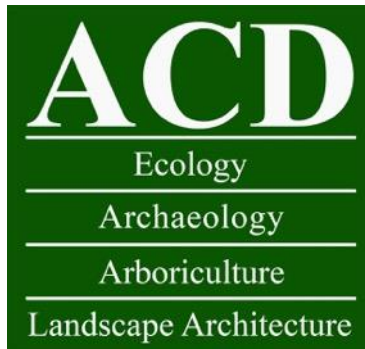
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scheme: Former Playing Fields
Stakes Road, Purbrook
client: Persimmon Homes
drawing: Tree Reference Plan
date: April 2015
scale: 1:200@A1
dwg no: PERSC19831-01
drawn: MW checked: CJP



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