

BURNDELL ROAD YAPTON

ARBORICULTURAL IMPACT ASSESSMENT & METHOD STATEMENT



BOVIS HOMES
(SOUTHERN
COUNTIES)

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1.0 Executive Summary

- 1.1. ACD was instructed, to draft this arboricultural impact assessment to accompany a reserved matter application following outline planning consent Y/19/16/OUT. This document is also suitable for addressing condition 7 of the same consent.
- 1.2. This report has been revised to reflect a revised layout. This has been amended to remove the parking bays from the RPA of T7, and the attenuation pond from the RPA of the adjacent tree in G10.
- 1.3. A number of residential dwellings is proposed on this field site, the layout of which can be seen on the appended plan.
- 1.4. Tree removals are limited to those of low quality and value.
- 1.5. There are no tree preservation orders on this site, nor is it within a conservation area.
- 1.6. The relationship between the building and retained trees is sustainable and is not likely to result in any pressure to prune requests from future occupants.
- 1.7. The arboricultural method statement and tree protection plan include details of all tree protection measures required.
- 1.8. The tree protection must be erected after tree removals and surgery but before any demolition or construction contractor enter the site, and before any soil stripping takes place.
- 1.9. There will be no changes in levels, service routeing, machine activity, storage of materials or site hut positioning within areas to be protected, and the protective fencing shall remain in position for the duration of the construction process.

2.0 Introduction

- 2.1. Bovis Homes (Southern Counties) instructed ACD Environmental in October 2018 to draft this arboricultural impact assessment to accompany a reserved matter application following outline planning consent Y/19/16/OUT. This document is also suitable for addressing condition 7 of the same consent.
- 2.2. Following the recommendations of the British Standard¹, this report includes the necessary information to support the planning application. It demonstrates that the impact, both direct and indirect, of the proposed development within the site, has been assessed and where appropriate, mitigation and tree protection proposed.
- 2.3. The implementation of the protection methods recommended within this report is critical for ensuring the retained trees are successfully protected through the construction process and must be implemented prior to any work on the site.
- 2.4. This assessment is based on the supplied drawing by Urban Pulse Design, ref: 18-1065-005-D.
- 2.5. The controlling authority is Arun District Council who can be contacted at: Arun Civic Centre, Maltravers Road, Littlehampton, West Sussex, BN17 5LF, Tel: 01903 737756.
- 2.6. This assessment considers the impact of the development on the constraints posed by the retained trees (both beneath ground: the root protection area (RPA), and above ground: the canopy).
- 2.7. Direct impact from development comes in six main forms: 1) Surface installation within RPAs, 2) Root loss from excavation for foundations, drainage and other utilities within RPAs, 3) Soil stripping, removal and level changes within RPAs, 4) Excessive access facilitation pruning to retained trees, 5) Soil compaction from storage and vehicle movements within RPAs, 6) Soil contamination.

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

- 2.8. Indirect impact can come from changes to the site hydrology, future pressure to prune or fell, failure of trees exposed by removal of neighbouring trees, and other environmental changes which can take several years to manifest.
- 2.9. The RPA for each tree represents a minimum area in m² that should be left undisturbed around each retained tree. This is initially represented by a circle but is often adjusted to account for constraints to root growth within the site (primarily highways and buildings). It is, therefore, important to ensure the protection of trees both above and below ground. Recommendations are provided in the British Standard as to the protection of existing trees before, during and after development. This is achieved by ensuring the tree protection plan and arboricultural method statement are implemented before any commencement on site.

3.0 Scope and Method of Survey

- 3.1. Tree data by PJC Consultancy, dated September 2015 was supplied to ACD. This data accompanied the outline planning application for the site (Y/19/16/OUT). The Author of this document visited the site on 14th November 2018 to verify and update that data. The updated 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.
- 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).

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

4.0 Arboricultural Impact Assessment

4.1. Overview of proposed development

4.1.1. A number of residential dwellings are proposed on this field site, the layout of which can be seen on the appended plan.

4.2. Tree Preservation Orders

4.2.1. There are no tree preservation orders (TPOs) present on any trees on, or adjacent to the site, nor is the site within a conservation area.

4.3. Previous planning applications and consents

4.3.1. Outline planning consent Y/19/16/OUT was granted via an appeal in 2017 for the development of a maximum of 108 No. residential dwellings, vehicular access from Burndell Road, public open space, ancillary works & associated infrastructure

4.4. Trees proposed for removal

4.4.1. The following trees are proposed for removal:

- Category U (poor quality)
 - T16 – small cherry of poor form
- Category C (low quality)
 - H2, H3 – both overgrown and undermanaged conifer hedges
 - T14, T15 - small conifers of poor form
 - G18 - group of self-seeded willow

4.4.2. In relation to the conception and design of development proposals, BS5837:2012 section 5.1.1 states: The constraints imposed by trees, both above and below ground should inform the site layout design, although it is recognised 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.

4.4.3. It is therefore deemed acceptable to remove the trees listed and, as part of the detailed landscape design for the scheme, include suitable and sustainable replacements as and where appropriate. This will more than mitigate any loss that may be felt from tree removals, by providing robust long-term tree cover in keeping with the proposal and surrounding properties.

4.4.4. All moderate to high-quality trees are to be retained.

4.5. Demolition, site clearance & archaeology

4.5.1. To ensure damage does not occur to trees highlighted for retention, tree protection fencing must be erected before ANY plant/vehicles entering site whatsoever. This should be subject to a pre-commencement site meeting between the developer and the project arboriculturist.

4.5.2. No special demolition procedures need be observed on this site, other than respecting the tree protection fencing.

4.6. Encroachments within RPAs

4.6.1. The construction of all buildings is proposed outside the RPAs of retained trees.

4.6.2. The revised layout supplied by Urban Pulse Design, ref: 18-1065-005-D has been adjusted such that the attenuation pond in the south-western corner does not encroach into the RPA of the adjacent oak tree in G10.

4.6.3. The site road passes very marginally within the circular RPAs for two trees within G6. It is deemed that the encroachment is marginal and not likely to be of detriment to the trees. Therefore, in the interest of producing a viable tree protection strategy that stands up to operational implementation, the same alternative solution is proposed as for the southern oak, in that the protection area is extended contiguous to the RPA.

4.6.4. The parking bays previously adjacent to T7 have been moved such that they are not within the RPA of the tree.

4.6.5. The garage for plot 18 has a marginal impact upon the RPA for one poplar in G6. This is a very minor encroachment and unlikely to result in detriment to the tree. Thus the tree protection fencing shown will suffice.

4.7. Protection fencing

4.7.1. Figure 2 of the British Standard recommends a standard fencing design for tree protection. This is a weld mesh panel design, mounted upon a well-braced scaffold framework. This is perfectly adequate for this site and all the retained trees can be suitably protected by its erection before any works start on site whatsoever.

4.8. Services

4.8.1. Full details of the service and utility provisions for the site remain to be finalised. However, there is adequate space for utility trenches to access the site whilst avoiding RPAs and exclusion zones.

5.0 Arboricultural Method Statement

TO BE READ IN CONJUNCTION WITH THE APPENDED TREE PROTECTION PLAN REF: BOV22172-03D

5.1. Phasing of operations & site supervision

5.1.1. The tree protection and other arboricultural works must be carried out in the following order:

	Operation	Present	Notes
1	Tree removals & surgery	Tree contractor	See Tree Protection Plan for trees to be removed
2	Protection barriers erected	Fencing contractor	See Tree Protection Plan for position and type of barriers
3	Pre-start meeting	ACD, site manager, groundwork, foreman, demolition foreman	To 'sign-off' protection prior to any plant activity, demolition & groundworks on site
4	No-dig path installation	ACD, groundwork contractor, site manager	Groundwork staff to receive toolbox-talk from project arboriculturist. See method statement
5	Removal of protection barriers and landscape work	ACD, landscape contractor, site manager	See method statement

5.1.2. Supervision is required should any unplanned access and/or work be required in the construction exclusion zone.

5.1.3. Supervision will require the arboriculturist to be present throughout the task, to ensure all the arboricultural objectives are met. If the task is to take a long period of time, provided the arboriculturist is satisfied, and after an initial 'tool-box talk', the supervision may be reduced to telephone contact between the site foreman/contractor and arboriculturist.

5.2. Construction exclusions zone

5.2.1. Barriers and/or ground protection must be used to protect all retained trees before any machinery or materials are brought onto the site, and before any demolition, development or stripping of soil commences.

5.2.2. Where all activity can be excluded from the RPA, vertical barriers must be erected to create the construction exclusion zone (CEZ). The default position of which is shown on the appended Tree Protection Plan.

5.2.3. Where, due to site constraints, construction activity cannot be fully or permanently excluded from all, or part of a tree's RPA, appropriate ground protection can be installed.

5.2.4. It is the responsibility of everyone engaged in the construction process to respect the tree protection measures and observe the necessary precautions within and adjacent to them.

5.2.5. Inside the exclusion zone, the following shall apply:

- No mechanical excavation whatsoever.
- No excavation by any other means without arboricultural site supervision.
- No hand digging without a written method statement having first been approved by the project arboriculturist.
- No lowering of levels for any purpose (except removal of grass sward using hand tools).
- No storage of plant or materials.
- No storage or handling of any chemical including cement washings.
- No vehicular access.
- No fire lighting.

5.2.6. In addition to the above, further precautions are necessary adjacent to trees:

- No substances injurious to tree health, including fuels, oil, bitumen, cement (including cement washings), builders sand, concrete mixing

and other chemicals shall be stored or used within or directly adjacent to the protection area of retained trees.

- No fire shall be lit such that flames come within 5m of tree foliage.

5.3. Tree protection barriers

5.3.1. The construction exclusion zone will be protected as per the appended tree protection plan that shows the default alignment of the tree protection barriers, to be installed prior to any of the following taking place:

- Archaeology
- Demolition
- Plant and material delivery
- Soil stripping
- Utility installation
- Construction works
- Landscaping

5.3.2. Stages of installation of barriers:

- 1) Hand clearance of any vegetation to allow clear working access.
- 2) Setting out of node points
- 3) Barriers erected
- 4) Site meeting with project arboriculturist to 'sign-off' tree protection fencing.
- 5) Site accessible to demolition/construction traffic

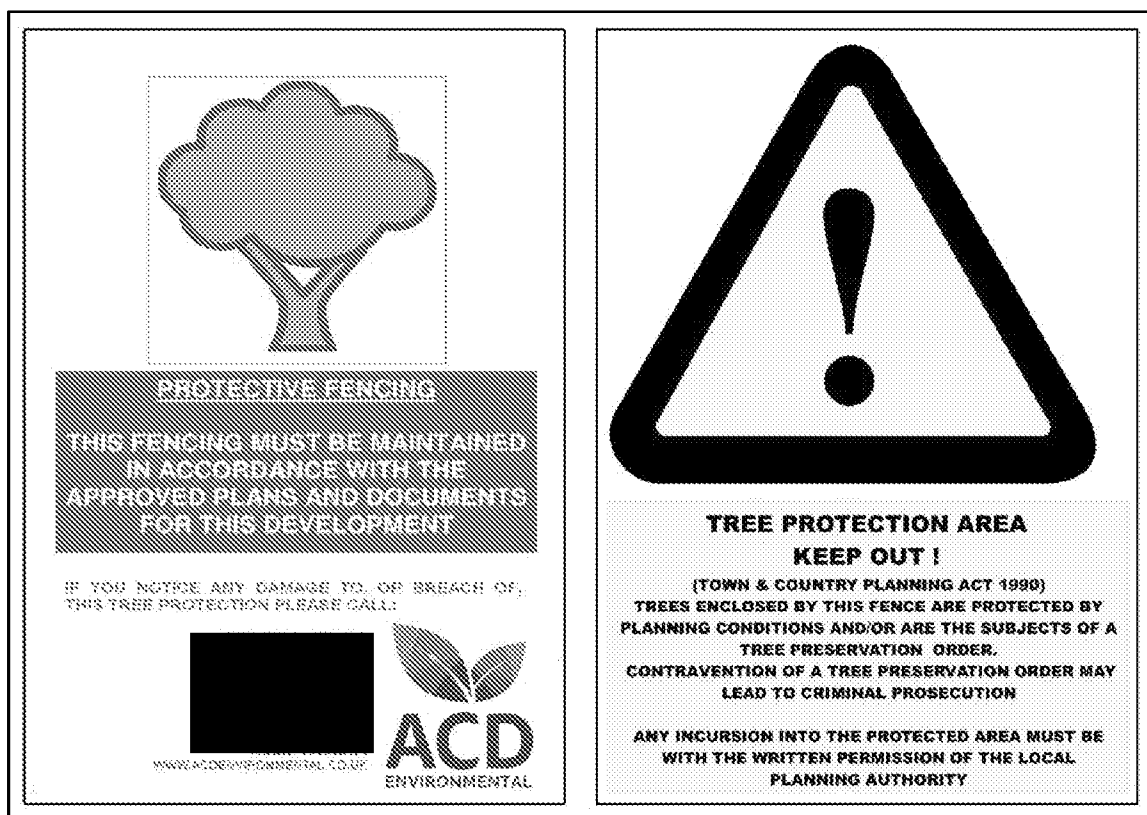
5.3.3. Once erected, all barriers will be regarded as sacrosanct, and will not be removed or altered without prior recommendation by the project arboriculturist and approval of the local planning authority.

5.3.4. The default barrier construction is suitable for areas of high-intensity development and shall comprise of interlocking weld-mesh panels, well braced to resist impacts by attachment to a scaffold framework that is set firmly into the ground. A detailed specification can be found on the TPP.

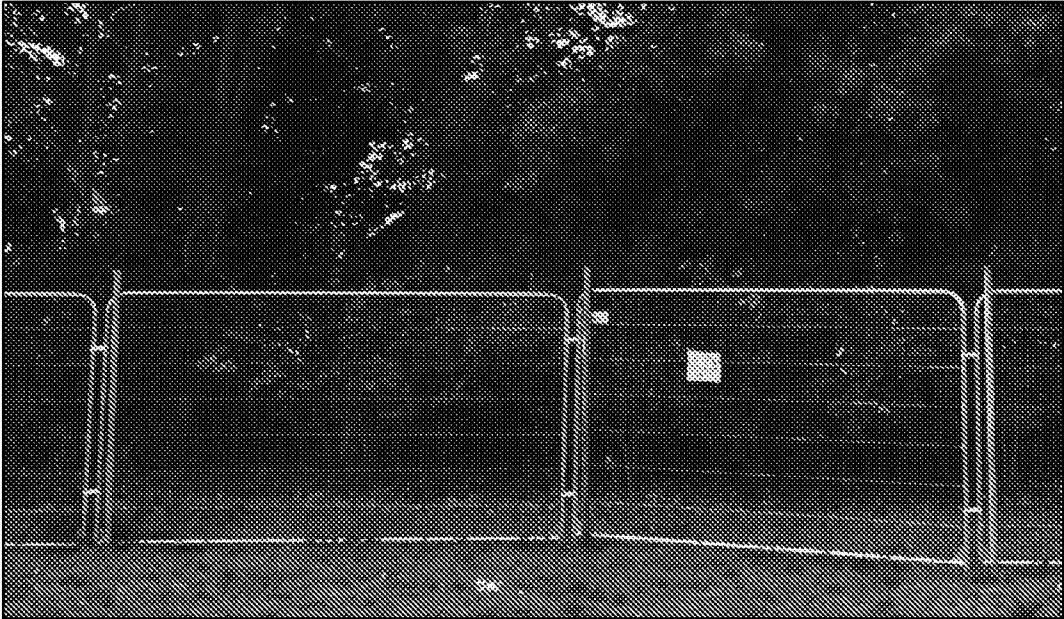
5.3.5. The images below are alternative barrier designs that have been successfully used on site and that ACD are happy to support if a variation from the default style is required. If such a variation is necessary, the approval of the project arboriculturist will be obtained prior to any implementation on site.

5.3.6. Once barriers and/or ground protection have protected the exclusion zone, construction work can commence.

5.3.7. All weather notices should be erected on the barriers (for example see figure below).



Tree protection sign (download from <http://www.acdenvironmental.co.uk>)



Weld-mesh panels on scaffold uprights



Weld-mesh panels on wooden posts



Chain-link on angle-iron uprights

5.4. Ground protection

5.4.1. If required (or as shown on the appended tree protection plan), ground protection is to be installed as follows. It must be capable of supporting the expected loads and avoiding rutting, compaction and damage to the soil: as advised in section 6.2.3 of the British Standard.

5.4.2. Stages of ground protection installation:

- 1) No plant machinery to be used in the area of ground protection for whatever reason
- 2) Dismantle primary TPF and re-erect in secondary location as shown on TPP (if required) OR erect fencing to protect any newly exposed CEZ not to be covered by ground protection.
- 3) Any shrubs, saplings or trees to be removed, are to be cut or ground out to just below ground level rather than grubbed or winched out, which can damage roots of retained trees.
- 4) Lay woven geotextile over existing ground surface by hand

- 5) Cover the area with compressible layer, woodchip, for example, using hand tools only
- 6) Cover compressible layer with side butting scaffold boards or plywood boards
- 7) Confirm surface is acceptable for use with project arboriculturist
- 8) Area ready for construction access

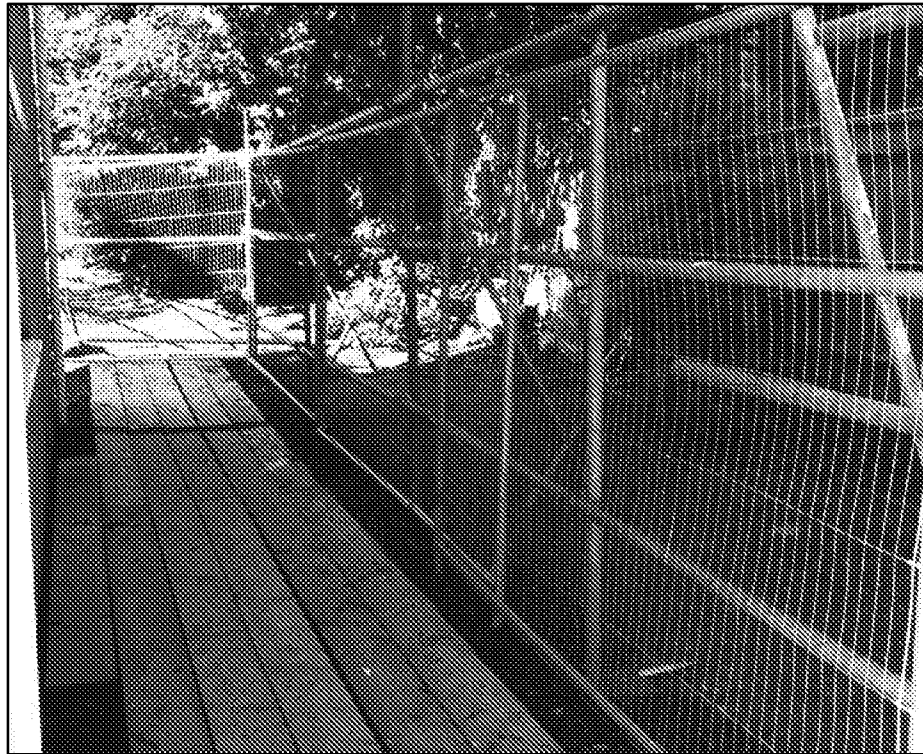
5.4.3. Any scaffolding required within the area will be erected with the uprights placed on spreader boards.

5.4.4. The boarding will be left in place until the construction works are finished.

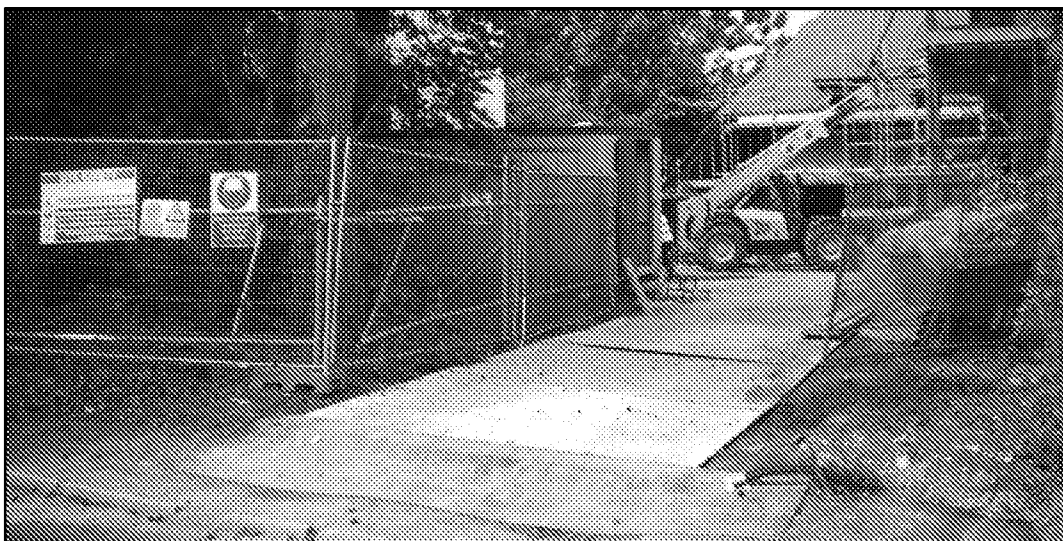
5.4.5. A single thickness of boarding laid on the soil surface will provide sufficient protection for pedestrian loads. However, for wheeled or tracked construction traffic movements within the RPA, ground protection will involve the use of temporary cellular confinement systems, reinforced concrete slabs or track-board systems details of which are to be specified by the project engineer and approved for use by the project arboriculturist and local authority before construction commences.

5.4.6. Track-boards can be sourced from Trakmats Europe Ltd, 0845 6435388, www.trakmatseurope.com, or groundguards.com

5.4.7. There is to be no excavation within ground protection area whatsoever. This includes installation of services and associated utilities.



Scaffold board pedestrian ground protection



Vehicular ground protection trackway

5.5. Site storage, parking, welfare facilities, etc.

5.5.1. The site will require provision for; site storage, contractor parking, welfare facilities, temporary services/drainage, material drop off points, etc.

5.5.2. It is acceptable to place site cabins and walkways within the CEZ provided they are installed sensitively:

- Cabins must be placed on sleepers (or similar) to spread the load, avoiding point loading and associated soil compaction.
- The delivery of cabins should ensure that any unloading via 'hi-ab' crane can be carried out without impact on the crowns of retained trees.
- Walkways, if required, should be installed as per the ground protection specification.
- Any utilities for site compounds must be run above ground. For example, WC foul pipes/drainage and temporary electrical connections.

5.5.3. It is imperative that if cabins and walkways are installed, that fencing is erected to limit access to the protected areas. If amendments are made, the project arboriculturist should sign off the proposals prior to their implementation.

5.5.4. Contractor parking and storage areas should be sited outside the CEZ.

5.6. Tree surgery and removal

5.6.1. All trees to be removed are indicated on the TPP.

5.6.2. If any surgery work is proposed, details will be submitted to, and approved by, the council, before being carried out.

5.6.3. All work will be carried out in accordance with BS3998³ industry best practice and in line with any works already agreed with the council.

5.6.4. The tree surgeon shall ideally be chosen from The Arboricultural Association's Approved Contractor list. All work shall be undertaken at the appropriate time and with the consent and approval of the site agent.

5.6.5. The statutory protection^{4 5} will be adhered to. If further advice is required, particularly if bats are discovered during tree work, it will be obtained from Natural England or other competent persons and recommendations adhered to.

5.6.6. The stumps of any trees removed from within the Construction Exclusion Zone or the RPAs of retained trees will be either cut flush to ground level and left in situ or ground out using a stump grinder. They will not be winched out.

5.6.7. All operations shall be carefully carried out to avoid damage to the trees being treated or neighbouring trees. No trees to be retained shall be used for anchorage or winching purposes.

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

⁴ *Wildlife and Countryside Act*. (1981) London: HMSO.

⁵ *Countryside and Rights of Way Act*. (2000) London: HMSO.

5.7. Soft landscaping

5.7.1. All landscaping and associated ground preparation within exclusion zones will be carried out sensitively to ensure root damage is minimised as much as is practicable.

5.7.2. At no time is any heavy plant to be used within any protected area.

5.7.3. Removal of existing vegetation (including turf) will be carried out with hand tools only.

5.7.4. Should the soil be compacted or have a poor structure that may hinder the development of any new planting, soil decompaction techniques may be used upon consultation with the project arboriculturist.

5.7.5. Tree protection barriers may be removed to allow access and then replaced as required/per approved documents (in liaison with the arboricultural clerk of works)

5.7.6. Levels (high spots) will not be reduced or excavated in any way. Use good quality topsoil to level any low-lying areas and hollows, and provide a fine tilth to lay turf on. This imported soil must not result in a level increase of more than 100mm in any area.

5.7.7. Import materials by hand in wheelbarrow or using a digger sited outside the sensitive area.

5.7.8. Any excavation for planting pits must be dug using hand tools only.

5.7.9. No works will be carried out within any protected areas if the soil moisture is at a level likely to allow compaction to occur.

5.8. Installation of underground services

5.8.1. Mechanical trenching for the installation of underground apparatus and drainage severs any roots present and can change the local soil hydrology in a way that adversely affects the health of the tree. For this reason, particular care should be taken in the routeing and methods of installation of all underground apparatus. Wherever possible, apparatus should be routed outside RPAs. Where this is not possible, it is preferable to keep apparatus together in common ducts. Inspection chambers should be sited outside the RPA.

5.8.2. Where underground apparatus is to pass within the RPA, detailed plans showing the proposed routeing should be drawn up in conjunction with the project arboriculturist. In such cases, trenchless insertion methods should be used: Microtunnelling, Surface-launched directional drilling, Pipe ramming or Impact moling (see BS5837:2012 Table 3), with entry and retrieval pits being sited outside the RPA. Provided that roots can be retained and protected, excavation using hand-held tools might be acceptable for shallow service runs. If this is the case, the following methodology must be followed:

5.8.3. Stages for installing services by hand within tree protection areas:

No plant machinery to be used in the area for whatever reason

- 1) Contact project arboriculturist to hold pre-start site meeting and 'toolbox' talk before starting work.
- 2) Remove just enough tree protection fencing to allow access to area and facilitate trenching.
- 3) Remove any surface vegetation or existing hard surfaces using hand tools.
- 4) Using an air-pick excavate the trench, keeping to minimum dimensions required.
- 5) Roots occurring in clumps of 25 mm diameter and over are encountered they will be retained and kept damp by covering with hessian (re-wetted as required). If required, these should be severed

only following consultation with an arboriculturist; as such roots might be essential to the tree's health and stability.

- 6) Feed in services.
- 7) Backfill trench with 200-300mm depth of excavated soil, or a mixture of excavated and imported topsoil to BS3882: 2015, firming down with heels.
- 8) Repeat step 7 until trench is filled.
- 9) Re-erect tree protection fencing as per approved plan.

5.8.4. The method of excavation above, for trenching within RPAs, is using air excavation. This tool utilises compressed air to remove soil from around tree roots causing minimal damage and can be run off a typical site compressor. ACD can provide details of contractors supplying air excavation services if required.

5.8.5. Alternatively, trenchless technology, such as thrust boring can be used in some instances and is particularly effective as it can pass directly under the tree, at a depth which is likely to avoid almost all impact on roots of the subject tree. As no access/thrust pits will be located within the RPAs of the subject trees, the need for arboricultural supervision is limited.

5.8.6. Reference can be made to NJUG Vol 4⁶ for guidance, but any approach must be approved by the project arboriculturist and brought to the attention of the local authority tree officer.

⁶ National Joint Utilities Group. (2010). *Volume 4: NJUG Guidelines For The Planning, Installation And Maintenance Of Utility Apparatus In Proximity To Trees (Issue 2) – Operatives Handbook*. NJUG.

5.9. Ditch Clearance Within Root Protection Areas

5.9.1. As an average tracked machine (<20 ton) applies less ground pressure than an average human, in principle the careful use of tracked excavators within RPAs is acceptable. Damage occurs when the excavator turns, chewing up the ground surface. Therefore, to avoid this the excavator must only travel in and out of the area in a linear manner, else ground protection matting must be used.

Stages for ditch clearance

- 1) Discuss procedure with project arboriculturist (via site meeting if appropriate).
- 2) Define sensitive area.
- 3) Remove tree protection fencing (if present) to allow access to area.
- 4) If access allows, use a small (<20ton) excavator with a bucket with no tines, to carefully remove debris avoiding excavation into original ditch profile, travelling in and out of the RPA in a single linear path to avoid turning. A banksman will be required. Any dumper used for transporting arisings must be sited outside the RPA.
- 5) If access is restricted, use hand tools to clear loose debris, avoiding excavation into the original ditch profile.
- 6) Once complete, erect tree protection fencing if required (see original tree protection plan).

5.10. Installation of boundary fencing within protected areas

5.10.1. Stages for installing wooden fence posts:

No plant machinery to be used in the area for whatever reason

- 1) Contact project arboriculturist to hold pre-start site meeting and 'toolbox' talk before starting work.
- 2) Remove TPF to allow access to area.
- 3) Dig postholes using hand tools, avoiding damage to the protective bark covering larger roots. Roots smaller than 25mm diameter may

be pruned back using either secateurs or a hand saw, leaving a clean cut.

- 4) Damage or severance of roots above 25mm diameter must be avoided. If roots of this size are discovered, the hole should be relocated. If there are a large number of such roots it may be necessary to relocate the hole by half a fence panels length and adjust the fence panels accordingly.
- 5) Line hole with non-porous lining, for example, durable polyethene bag.
- 6) Insert post and fill post-hole with concrete to just below ground level.
- 7) Trim polyethene to ground level and fill with clean topsoil.

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14 November 2018

Revised 04.04.2018
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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

CLIENT: Bovis Homes (Southern Counties)
 SITE: Burndell Road, Yapton
 DATE: Nov 2018

SURVEYOR: M Welby Tech Cert (ArborA), Dip Arb (RFS), FArborA
 TAGGED? No

Tree Survey Schedule

Based upon outline application tree data from PJC dated December 2015- Updated data in bold

No.	Name	Ht (crown)	Dia (stems)	Crown spread (NESW)	Life stage	ERC	Comments & preliminary recommendations	BS Cat
T1	Ilex aquifolium (Holly)	5(2)	250(2)	2.5, 2.5, 2.5, 2.5	M	10+	No obvious significant defects. Small with limited current landscape value. Diameter estimated.	C1
H2	Leyland Cypress (Cupressus x leylandii)	8(0)	250(1)	As shown on plan	SM	10+	Diameter is estimated average. Sporadic growth, previously topped resulting in poor form	C2
H3	Chamaecyparis lawsoniana (Lawson Cypress)	9.5(0)	260(1)	3, 3, 3, 3	M	10+	Little wider long-term landscape value. Provides some screen. Diameter is estimated average.	C2
H4	Hawthorn (Crataegus monogyna)	6(0)	100(1)	As shown on plan	M	20+	Provides good visual screen. Ivy throughout	B2
H5	Elm (Ulmus spp.) Hawthorn (Crataegus monogyna)	3(0)	100(1)	As shown on plan	M	10+	Sporadic growth with limited visual amenity	C2
G6	Lombardy Poplar (Populus nigra italica)	14(4)	700(1)	3, 3, 3, 3	M	20+	Diameter is estimated average. Dead wood and dieback present within crown	B2
T7	English Oak (Quercus robur)	8(2)	640(1)	7, 6.5, 7, 6.5	M	20+	No obvious significant defects. Fair quality with some landscape value. Recommendations: None	B1
T8	English Oak (Quercus robur)	7(2)	560(1)	4, 4, 3, 4	M	10+	Dead wood and dieback present within crown Recommendations: Fell if constraint to design	C2
T9	English Oak (Quercus robur)	6(3)	420(1)	6, 5, 1, 2	EM	10+	Ivy on stem. Stunted and windswept Recommendations: None	C2

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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CLIENT: Bovis Homes (Southern Counties)
 SITE: Burndell Road, Yapton
 DATE: Nov 2018

SURVEYOR: M Welby Tech Cert (ArborA), Dip Arb (RFS), FArborA

TAGGED? No

No.	Name	Ht (crown)	Dia (stems)	Crown spread (NESW)	Life stage	ERC	Comments & preliminary recommendations	BS Cat
G10	English Oak (<i>Quercus robur</i>)	12(3)	680(1)	6, 6, 6, 6	M	20+	Fair quality with some landscape value. Diameter is estimated average.	B2
T11	English Oak (<i>Quercus robur</i>)	7(1)	810(1)	7.5, 5, 6, 5	M	20+	No obvious significant defects. Fair quality with some landscape value.	B1
T12	X Cupressocyparis leylandii (Leyland Cypress)	4.5(1)	300(1)	3, 0, 3, 3	M	<10	Poor shape and form. Off-site and inaccessible: diameter estimated.	U
T13	Leyland Cypress (<i>Cupressus</i> x leylandii)	8(0)	250(1)	2.5, 2.5, 2.5, 2.5	M	10+	Plotted by eye on plan. Diameter estimated. Sporadic growth, previously topped resulting in poor form	C2
T14	Leyland Cypress (<i>Cupressus</i> x leylandii)	4(0)	250(1)	2.5, 2.5, 2.5, 2.5	M	10+	Diameter estimated. Sporadic growth, previously topped resulting in poor form	C2
T15	<i>Chamaecyparis lawsoniana</i> (Lawson Cypress)	9(3)	250(2)	3, 2.5, 2.5, 2.5	M	10+	Inaccessible: diameter estimated. Isolated specimen. Remaining end tree if felled group	C1
T16	<i>Prunus padus</i> (Bird Cherry)	4(1)	250(1)	2.5, 2, 2, 2	M	<10	Poor shape and form. Diameter estimated.	U
T17	<i>Chamaecyparis lawsoniana</i> (Lawson Cypress)	4.5(0.5)	250(1)	2.5, 2.5, 2.5, 2.5	M	10+	Small with limited current landscape value. Inaccessible: diameter estimated.	C1
G18	<i>Salix caprea</i> (Goat Willow)	5(0)	200(1)	3, 3, 3, 3	M	10+	Self-seeded group of stems. Diameter is estimated average.	C2
T19	<i>Crataegus monogyna</i> (Hawthorn)	5(1)	150(3)	3, 2, 2, 2	M	10+	Small with limited current landscape value. Inaccessible: diameter estimated.	C1
T20	<i>Corylus avellana</i> (Hazel)	3(0.5)	60(7)	3, 2, 1, 2	M	10+	Small with limited current landscape value. Diameter estimated.	C1
T21	<i>Crataegus monogyna</i> (Hawthorn)	3.5(1)	150(3)	3, 2, 2, 2	M	10+	Small with limited current landscape value. Inaccessible: diameter estimated.	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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Appendix 3: Tree Protection Plan

BOV22172-03D



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