Land at
Roundstone Lane
Angmering
Littlehampton
West Sussex

ARBORICULTURAL IMPACT ASSESSMENT

(INC. METHOD STATEMENT)

PREPARED BY

ACD ARBORICULTURE

FOR

Space to live
David Wilson Homes

ACD

Ecology
Arboriculture
Landscape Architecture

Written by:	A Bigg
Checked by:	M Welby
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1. EXECUTIVE SUMMARY

1.1. The proposed layout is in line with recommendations of BS5837 (BSI 2012 British Standards Institute). Adequate protection can be provided to ensure all retained trees are protected throughout development.

1.2. This arboricultural report has been revised, 20th February 2014, to reflect an amended site layout. Whilst three additional trees have been identified for removal, the amended proposals no longer require areas of proposed 'no-dig' surfacing within RPAs and result in a more satisfactory relationship to retained on-site trees.

1.1. Survey data is extracted from, and reference should be made to, the tree survey that preceded this report. (ACD Ref: BSH17576trB). This survey pre-dates the revision to BS5837:2012 in April 2012. An on-site review of the tree survey data was undertaken on 19th February 2014.

1.3. The development proposals for the site are residential in nature. A new entrance feature is proposed on the western boundary with Roundstone Lane. Trees proposed for removal are predominately recorded within the lower categories, sections of internal hedgerows and a single category 'B' tree.

1.4. Some site supervision will be required during the demolition of existing stable units and should there be any unplanned incursions within root protection areas/ construction exclusion areas.

1.5. The relationship between the buildings and retained trees is sustainable and does not result in any situations that may result in unreasonable pressure to prune requests from future occupants.

1.6. The arboricultural method statement and tree protection plan include details of all tree protection measures required, including provision for site supervision where required.

1.7. Any fencing and other tree protection measures should be erected after tree surgery but before any demolition or construction contractor enter the site, and before any soil stripping takes place.

1.8. There must be no changes in levels, service routing, machine activity, storage of materials or site hut positioning within areas to be protected and the protective fencing must remain in position for the duration of the construction process.

1.9. The controlling authority is Arun District Council Council, who can be contacted at:

Arun Civic Centre, Maltravers Road, Littlehampton, West Sussex BN17 5LF (01903) 737756.

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2. INTRODUCTION

2.1. David Wilson Homes instructed ACD Arboriculture in July 2012 to prepare the following arboricultural report. This report has been revised, 20th February 2014, to reflect an amended site layout.

2.2. Following the recommendations of BS5837:2012 Trees in relation to design, demolition and construction- Recommendations (BSI 2012 British Standards Institute), this report includes the necessary information to support a 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 any protection methods and special construction details recommended within this report are critical for ensuring the retained trees are successfully protected through the construction process and must be implemented prior to any work on site.

2.4. This assessment is based upon the supplied layout drawing, reference number ST-02-12L CAD Planning Layout and Siteline topographical survey, reference number 36RS001.

2.5. 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), and material considerations in relation to planning policy.

2.6. Direct impact from development comes in five 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/contamination, from storage and vehicle movements within RPAs

2.7. 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.

2.8. 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.

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3. ARBORICULTURAL IMPACT ASSESSMENT

3.1. OVERVIEW OF PROPOSED DEVELOPMENT

3.1.1. The development proposals for the site are residential in nature. A new entrance feature is proposed on the western boundary with Roundstone Lane. Trees proposed for removal are predominately lower category individuals, sections of internal hedgerows and the removal of a single category 'B' tree.

3.2. TREES PROPOSED FOR REMOVAL & SURGERY

No.	Name	Operation	BS Cat
T6	Holly	Fell to ground level and remove. To facilitate internal highway infrastructure.	C
T8	Elder	Fell to ground level and remove. To facilitate internal footpath infrastructure.	C
T10	Silver Birch	Fell to ground level and remove. To facilitate internal highway infrastructure.	B
T12	Norway maple	Crown reduce southern side to 3m horizontal distance from trunk (a lateral reduction of 1.5m from crown edge).	B
T13	Norway maple	Crown reduce southern side to 3m horizontal distance from trunk (a lateral reduction of 1.5m from crown edge).	B
T18	Common Ash	Fell to ground level and remove	R
T19	Common Ash	Fell to ground level and remove	R
T20	Common Ash	Fell to ground level and remove	R
T22	English Oak	Crown lift western side to 4m only, to improve driveway clearance	A
T24	Sycamore	Off-site tree should be removed with land owners consent	R
G4	Lawson Cypress	Trim northern side of unmanaged group, by no more than 1.5m. To start formalising boundary trees.	B
G5	Hybrid Black Poplar	Crown lift to 6m To facilitate internal highway infrastructure. Remove all recent storm damaged limbs.	A
G7	Mixed species (partial)	Fell selected stems to facilitate internal highway infrastructure. Trim northern side of unmanaged hedgerow, by no more than 0.5m. To start formalising internal hedgerow.	C
G10	Mixed species (partial)	Fell selected stems to facilitate internal highway infrastructure Management reduction works and removal of dead individuals to improve hedgerow condition	C

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3.2.1. Trees to be removed are predominately recorded within the lower categories, some sections of hedgerow groups G7 and G10 and category 'B' Silver birch T10.

3.2.2. T10 is to be removed to facilitate the access driveway for plot one. Whilst there are 'no-dig' surface solutions available to reduce the impact of new surfacing within RPAs, in this case this is unlikely to be viable. Given the existing compaction from historic livery land use and the proximity of the proposed driveway edge to the trunk it is recommended that the tree is removed and a suitable replacement planting is shown within the wider landscape proposals.

3.2.3. The remaining trees identified for removal are of low quality/value and have limited wider landscape significance. A single off-site tree: no. T24, is of a reduced structural condition and should be removed for sound arboricultural reasons. Permission from the land owner will be required before the tree can be removed. All remaining trees of moderate to high quality and value are to be retained.

3.2.4. Under the Hedgerows Regulations 1997, the outgrown understory hedgerow group G10 is considered 'important' given its historical presence, connections to other hedges, low percentage gaps (two recorded), mature trees and diversity of plant species. Some sections of this hedgerow are shown to be removed to facilitate the development proposals. Remaining sections are to be reduced in size through a series of proposed management surgery works. These management works will be beneficial in retaining a mature understorey screen, which will make a continued long term contribution to the overall character of the site.

3.3. **DEMOLITION & SITE CLEARANCE**

3.3.1. 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, their project arboriculturist and a representative from the Local Authority.

3.3.2. There are two existing stable blocks on-site within the RPAs of adjacent trees nos. T16 and T22. To avoid root damage sensitive demolition will be required. This would include a pre-start meeting and 'toolbox' discussion before commencement of demolition works and on-site supervision with the project arboriculturist.

3.4. **GROUND PROTECTION**

3.4.1. In certain areas, space required to construct buildings will require encroachment into RPAs. Potential damage cause by foot traffic and associated works can be mitigated by the use of ground protection as specified in BS5837:2012 section 6.2.3. To ensure the ongoing survival of the retained trees, this is detailed in the Arboricultural Method Statement and indicated on the Tree Protection Plan where required.

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3.5. **CONSTRUCTION AND PERMANENT HARD SURFACES WITHIN RPAS**

3.5.1. The constructions of all proposed units are planned as outside the RPAs of all trees to be retained.

3.5.2. In section 7.4 of the British Standard, permanent hard surfacing within the RPAs of retained trees is addressed, and recommendations are made.

3.5.3. There is an incursion into the RPAs of tree nos. T23 by a proposed footpath and turning head into T11. The areas immediately around the trees have been historically used as horse pasture and as such there is significant ground rutting/compaction. These encroachments are considered marginal, less than 2% of the total RPAs and will not be to the detriment of the trees. Therefore special construction measures/adjustment of the plans are not required.

3.5.4. Within the RPAs of off-site trees nos. T25 – T27 a footpath connecting to Cow Lane is proposed. This section has continually been used as an entrance and egress, and as such the ground is heavily rutted and compacted. It is unlikely there are significant roots in this area; therefore special construction measures are not required. The improvements to ground levels here will be to the benefit of adjacent trees.

3.6. **PROTECTION FENCING**

3.6.1. 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.

3.7. **SERVICES**

3.7.1. 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.

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4. ARBORICULTURAL METHOD STATEMENT

TO BE READ INCONJUNCTION WITH THE APPENDED TREE PROTECTION PLAN REF: BSH17576-03

4.1. PHASING OF OPERATIONS & SITE SUPERVISION

4.1.1. The development process will be subject to arboricultural supervision, especially areas where incursion into the RPA of retained trees is required. Therefore, input and supervision from the project arboriculturist will be required at the following stages:

1) Pre-start site meeting with groundwork contractors, site manager and LPA arboricultural officer/landscape officer.
2) Removal of existing stable blocks

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

4.1.3. 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.

4.2. TREE PROTECTION AREAS

4.2.1. Based on tree survey data, tree protection areas have been determined for every retained tree. These areas are designed to protect at least a functional minimum of tree root mass in order to ensure that the trees survive the construction process.

4.2.2. 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.

4.2.3. Inside the exclusion area of the fencing, the following shall apply:

- No mechanical excavation whatsoever
- No excavation by any other means without arboricultural site supervision
- No digging without a method statement 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 fire lighting

4.2.4. 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

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shall be stored or used within or directly adjacent to the protection area of retained trees

4.3. **TREE PROTECTION FENCING**

4.3.1. The tree protection plan (see the latest revision of: BSH17576-03) shows the alignment of tree protection fencing (TPF), which is to be installed prior to any of the following taking place:

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

4.3.2. Stages for installation of TPF:

1) Hand clearance of any vegetation to allow clear working access.

2) Setting out of fencing points

3) Fencing erected

4) Site meeting with project arboriculturist to 'sign-off' tree protection fencing.

5) Site accessible to demolition/construction traffic

4.3.3. Once erected, all TPF 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.

4.3.4. The typical TPF 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.

4.3.5. If any alternative method of barrier construction is proposed, consultation with the project arboriculturist will be obtained to clarify the efficacy of the revised design prior to informing the local planning authority and obtaining their consent.

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

4.3.7. All weather notices should be erected on the barriers.

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4.4. SITE STORAGE, PARKING, WELFARE FACILITIES, ETC.

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

4.4.2. No details of these provisions are available at the time of writing of this report.

4.4.3. None of the above provisions will be sited within RPAs of retained trees without the input or the project arboriculturist and the consent of the Local Authority.

4.5. TREE SURGERY AND REMOVAL

4.5.1. Proposed tree surgery works are recorded within section 3.2 of the arboricultural impact assessment. If any further surgery works are proposed, they will be submitted to, and approved by, The Council, before being carried out

4.5.2. Under the Hedgerows Regulations 1997, the outgrown understory hedgerow group G10 is considered 'important' given its historical presence, connections to other hedges, low percentage gaps (two recorded), mature trees and diversity of plant species. Some sections of this hedgerow are shown to be removed to facilitate the development proposals. Remaining sections are to be reduced in size through a series of management surgery works. These management works will be beneficial in retaining a mature understorey screen, which will make a continued long term contribution to the overall character of the site

4.5.3. All works will be carried out in accordance with BS3998 (BSI 2010 British Standards Institute) industry best practice and in line with any works already agreed with the Council.

4.5.4. The statutory protection afforded by the Wildlife and Countryside Act (1981) and Countryside and Rights of Way Act (2000) 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.

4.5.5. 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.

4.5.6. 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.

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4.6. **GROUND PROTECTION**

4.6.1. The proposed ground protection to be installed adjacent to unit one, as shown on the Tree Protection Plan, must be capable of supporting the expected loads and avoiding rutting, compaction and damage to the soil. As advised in BS5837:2012 section 6.2.3:

4.6.2. New temporary ground protection should be capable of supporting any traffic entering or using the site without being distorted or causing compaction of underlying soil. The ground protection might comprise one of the following:

a) for pedestrian movements only, a single thickness of scaffold boards placed either on top of a driven scaffold frame, so as to form a suspended walkway, or on top of a compression-resistant layer (e.g. 100 mm depth of woodchip), laid onto a geotextile membrane;
b) for pedestrian-operated plant up to a gross weight of 2 t, proprietary, inter-linked ground protection boards placed on top of a compression-resistant layer (e.g. 150 mm depth of woodchip), laid onto a geotextile membrane;
c) for wheeled or tracked construction traffic exceeding 2 t gross weight, an alternative system (e.g. proprietary systems or pre-cast reinforced concrete slabs) to an engineering specification designed in conjunction with arboricultural advice, to accommodate the likely loading to which it will be subjected.

4.6.3. Stages for ground protection installation[1]:

<u>No plant machinery to be used in the area of ground protection for whatever reason</u>

1) 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.
2) Lay woven geotextile over existing ground surface by hand.
3) Cover the area with compressible layer, woodchip for example, using hand tools only.
4) Cover compressible layer with side butting scaffold boards or plywood boards
5) Confirm surface is acceptable for use with project arboriculturist.
6) Area ready for construction access.

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

[1]For protection from foot traffic only

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4.7. **SOFT LANDSCAPING**

4.7.1. All landscaping and associated ground preparation within exclusion zones will be carried out sensitively to ensure root damage is mitigated as much as is practicable. At no time is any heavy plant to be used within any protected area. Removal of existing vegetation will be carried out by hand, turf may be removed using a mechanical turf stripper or by hand.

Turfing

4.7.2. Stages for turfing gardens and open spaces:

1) No plant/machinery to be used in the area for whatever reason
2) Remove TPF to allow access to area.
3) Do not reduce any high spots or excavate in any way.
4) Existing poor quality turf may be removed with a turf stripper.
5) Use good quality top-soil 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.
6) Import turves by hand in wheelbarrow
7) Lay turves

Planting

4.7.3. 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.

4.7.4. Stages for planting within tree protection areas:

1) No plant machinery to be used in the area for whatever reason
2) Remove TPF to allow access to area.
3) Remove existing vegetation by hand, turf may be removed using a mechanical turf stripper.
4) Do not reduce any high spots or excavate in any way.
5) Import good quality top-soil by hand (with wheelbarrow) into area.
6) Level to a depth of no more than 100mm with hand tools
7) Dig individual planting pits for each plant by hand (including hedging which must not be trench planted)
8) Any mulch should also be imported and spread by hand.

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

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4.8. INSTALLATION OF UNDERGROUND SERVICES

4.8.1. 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.

4.8.2. 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 case, the following methodology must be followed:

4.8.3. 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 and 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) Back fill trench with 200-300mm depth of excavated soil, or a mixture of excavated and imported top-soil to BS3882 (BSI 2007 British Standards Institute), firming down with heels
8) Repeat step 7 until trench is filled
9) Re-erect tree protection fencing as per approved plan

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

4.8.5. 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.

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4.9. **DEMOLITION CLOSE TO TREES**

4.9.1. All TPF to be installed as per approved Tree Protection Plan prior to any plant arriving on site.

4.9.2. Sensitive demolition will occur under supervision from the project arboriculturist

4.9.3. Stages for demolition within tree protection areas:

1) No plant machinery to be sited on any exposed rooting area
2) Contact project arboriculturist to hold pre-start site meeting and 'toolbox' talk before starting work
3) Buildings to be folded in on themselves
4) Removal debris by hand or with plant machinery not located on any exposed rooting area.
5) Floor to be broken up with had held breaker and pieces removed by hand. Slab floor can be lifted carefully by machinery if appropriate
6) Underlying ground levels to be retained. No excavation to occur
7) Any exposed roots and surrounding newly exposed areas to be covered with up to 100mm of topsoil, from elsewhere on site, or imported top-soil to BS3882 (BSI 2007 British Standards Institute). Soil may be placed in area by plant but must be spread by hand.
8) Tree protection fencing to be erected in final position as shown on plan

4.9.4. No reduction in levels of the underlying soil surface will occur.

4.9.5. At no point are any heavy machinery permitted within the RPA.

4.9.6. Contamination of the soil by fuel and lubricant leaks must be avoided at all cost. If such a situation arises the project arboriculturist must be notified to assess the situation and prescribe remedial measures.

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4.10. EXCAVATION WIHTIN RPAS

4.10.1. Stages for excavation within RPAs:

1) Contact project arboriculturist to hold pre-start site meeting, 'toolbox' talk and supervise the operation.
2) Remove TPF to allow access to area (if required).
3) Identify sensitive area.
4) Remove hard surface if necessary (see relevant section of this report).
5) Excavate with no-tines bucket, or by hand, under close supervision.
6) If roots are found, clear by hand around them.
7) If roots found are greater than 25mm diameter then cover with damp hessian and keep moist until backfilled. If excavation requires all roots to be severed then proceed as below.
8) Cleanly sever roots with bypass secateurs, loppers or pull cut saw at right angles to root. Avoid tearing or ripping the root.
9) Backfill as soon as possible to cover cut root ends.

24.2. If, for whatever reason, the project arboriculturist feels that a tree's stability has been compromised during the operation, then the LPA shall be contacted and the arboricultural officer (or appropriate landscape officer) notified. A decision can then be made as to the best way forward.

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Andrew Bigg RFS Cert Arb
Arboriculturist
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APPENDIX 1: TREE PROTECTION PLAN

BSH17576-03

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Manor Nursery

Possible Future Access

Existing entrance feature has extensive historical use, heavily rutted and unlikely to contain significant rooting mass.

Existing stable unit to be demolished and hard standing removal under on-site supervision of project arboriculturist.

Temporary ground protection, capable of supporting expected loads: see method statement section 4.6

Roundstone Lane

A280 Angmering Bypass

Play Area (LEAP)

Existing stable unit to be demolished and hard standing removal under on-site supervision of project arboriculturist.

Kickabout Area

Possible future footpath access

Possible future access

Pound Place

Play Area (LAP)

Public Open Space

Approx. line of existing public footpath on the Rugby Club land

Possible future access

Rugby Club

WHY TREE PROTECTION IS NEEDED

1) **Soil compaction kills roots** - caused by plant movement and storage of materials within protected areas ,

2) **Trenching severs roots**- many small roots grow within the top 600mm of soil. Even the removal of the top 200mm can cause damage. 3) **Soil pollution kills roots** - fuel, oil, concrete mixings or cement washings can contaminate the soil resulting in root death.

4) **Raising & lowering levels kills roots**- the soil used to increase levels can compact the underlying soil (see point 1). Lowering levels will remove roots causing damage to the tree.

5) **Bark and branch damage**- bark removal and branch damage can allow disease and fungi into the tree.

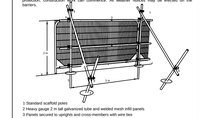
The impact of any of the above can take years to show- trees can have huge reserves of food and water.

Legend

TREE PROTECTION FENCING & EXCLUSION ZONE

All fencing shall be installed prior to any plant activity on site whatsoever, including: demolition, utility installation, groundworks, and soil stripping.

Once erected, all TPF will be regarded as sacrosanct, and will not be removed or altered without the prior written approval of the project arboriculturist and the local planning authority. The TPF 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 as shown. Only if the TPF is unable to be erected before any demolition or construction be proposed, consultation with the project arboriculturist will be obtained to clarify the efficacy of the revised design prior to informing the local planning authority and obtaining their consent. Once the exclusion zone has been protected by barriers and/or ground protection, construction may then commence. All weather notices may be erected on the barriers.



1 Standard scaffold poles
2 Heras gauge 2 m tall galvanized tube and welded mesh infill panels
3 Panels secured to uprights and cross members with wire ties
4 Ground level
5 Uprights driven into the ground until secure (minimum depth 0.6 m)
6 Standard scaffold clamps

TEMPORARY FENCING
Temporary fencing is used to protect areas of special detail and is to be removed when the detail is installed as per the method statement & under the supervision of the project arboriculturist.

SENSITIVE DEMOLITION
The existing features are within the RPAs of adjacent trees to be retained and therefore to minimise impact on underlying roots they are to be demolished as per the method statement & under the supervision of the project arboriculturist.

TREE TO BE RETAINED

TREE TO BE REMOVED

A CATEGORY TREE
B CATEGORY TREE
C CATEGORY TREE
X CATEGORY TREE

ROOT PROTECTION AREA (RPA) FOR RETAINED TREES

RESTRICTIONS WITHIN TREE PROTECTION AREAS

Inside the exclusion area of the fencing, the following shall apply:

- No mechanical excavation whatsoever
- No excavation by any other means without arboricultural site supervision
- No changes in ground levels except in accordance with a 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 mixing of materials
- No fire lighting

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

- Any liquids, including fuel, oil, bitumen, cement products, bitumen, cement (including cement washings), builder's sand, concrete mixing and other chemicals shall be stored or used within or directly adjacent to the protection area in such a manner
- No fire shall be lit such that flames come within 5m of tree foliage.

PHASING, SUPERVISION & MONITORING OF DEVELOPMENT

Before any work starts on site, the tree protection measures shown on this plan are to be installed and a pre-start site meeting with the project arboriculturist, groundwork contractors, site manager and LPA arboricultural officer/landscape officer held. Following this meeting, the demolition and construction phases are subject to monthly site monitoring visits from project arboriculturist.

Additional site supervision and input from the project arboriculturist is to occur:

1. Pre-start meeting with groundwork contractors, site manager and LPA arboricultural officer
2. During the removal of existing stable blocks

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

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

0 5 10 15 20 25m

Rev	Date	Details	Drawn
A	20/02/14	Amended site layout	AJB

ACD
Ecology
Arboriculture
Landscape Architecture

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

Tanners, Lower Street
Haslemere, Surrey, GU27 2PE
Tel: 01483 425714 Fax: 01428 641090

12 Southgate Street, Winchester,
Hampshire, SO23 9EF
Tel: 01962 855684
www.acdlandscape.co.uk

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DAVID WILSON HOMES

scheme: Land at Roundstone, Angmering
client: David Wilson Homes

drawing: Tree Protection Plan
date: July 2012
scale: 1:500@A0
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drawn: AJB checked: MW

ARUN DISTRICT COUNCIL A3/2/13

ACD LANDSCAPE ARCHITECTS LTD
RODBOURNE RAIL BUSINESS CENTRE
GRANGE LANE
MALMESBURY
WILTSHIRE
SN16 0ES
TEL: (01666) 825646 FAX: (01666) 824654
email: mail@acdlandscape.co.uk
CONTACT: JOHN CONSTABLE

ACD ECOLOGY LTD
RODBOURNE RAIL BUSINESS CENTRE
GRANGE LANE
MALMESBURY
WILTSHIRE
SN16 0ES
TEL: (01666) 825646 FAX: (01666) 824654
email: mail@acdlandscape.co.uk
CONTACT: DUNCAN MURRAY

ACD ARBORICULTURE LTD
COURTYARD HOUSE
MILL LANE
GODALMING
SURREY
GU7 1EY
TEL: (01483) 425714
email: m.welby@acdarb.co.uk
CONTACT: MARK WELBY

ACD (LANDSCAPE ARCHITECTS) SOUTHAMPTON LTD
12 SOUTHGATE STREET
WINCHESTER
HAMPSHIRE
SO23 9EF
TEL: (01962) 855604
email: a.wells@acdlandscape.co.uk
CONTACT: ANNETTE WELLS

ECOLOGY * ARBORICULTURE * ARBORICULTURAL SITE MONITORING AND SUPERVISION LANDSCAPE & VISUAL IMPACT ASSESSMENT * LANDSCAPE DESIGN & PLANNING * LANDSCAPE MANAGEMENT * LANDSCAPE AUDIT * PROJECT MANAGEMENT * EXPERT WITNESS