

March 2009
CBA7279

J S Bloor (Newbury) Ltd

ARUN DISTRICT COUNCIL				
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CBA Trees

*The Complete Professional
Arboricultural Consultancy*

ARBORICULTURAL DEVELOPMENT STATEMENT

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Angmering

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CBA7279

ARBORICULTURAL DEVELOPMENT STATEMENT
(incorporating Arboricultural Implications Assessment and
Method Statement in accordance with BS5837:2005)

Client: J S Bloor (Newbury) Ltd
Site: Station Road, Angmering
Arboricultural Consultant: Graham Sear (*Techcert*) Arbor A, ND Arb
Date: 3rd March 2009

SUMMARY

The proposal is for the construction of 11 (eleven) dwellings with gardens, car parking and associated driveways and footpaths, at the site of Station Road, Angmering. The Arboricultural Development Statement (ADS) will demonstrate the protection measures for the retained trees.

This Arboricultural Development Statement should be read in association with the Tree Protection Plan CBA7279.03. This plan identifies the individual trees and groups of trees to be removed, and those to be retained. It follows the initial tree survey, implications assessment and on-going discussions to minimise the impact upon the existing tree stock.

The emphasis of the report is predominantly that of preservation and tree protection. It identifies methodologies to provide protection for trees, to ensure their healthy and safe retention during and post development, as guided by BS5837:2005, and current best practice.

A total of 3 (three) individual trees can be retained within the development as detailed within this report. CBA Trees believes that the trees highlighted for retention within this report can be retained without undue stress on their long-term health.

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Supporting Information/Appendices

CB1	Tree Survey Schedule and Tree Survey Plan CBA7279.01
CB2	Root Protection Area Schedule
CB3	Tree Protection Plan CBA7279.03

Guiding Principles/Appendices

CB4	Tree Protection Guidance Leaflet Construction Exclusion Zone Site Notice Common Causes of Damage During Construction Works
CB5	Flow Diagram Summarising the Planning Process for Trees on Development Sites
CB6	Utilities Service Connection General Method Statement
CB7	Qualifications and Experience

PART 1

ARBORICULTURAL IMPLICATIONS ASSESSMENT

1.0 INTRODUCTION

- 1.1 There is a development proposal for the site which was previously a garage with hard standing forecourt. The site is located on Station Road, Angmering.
- 1.2 The proposal is for the construction of 11 (eleven) new dwellings of varying layout design, some of which have allocated garages and garden space with associated driveways, car parking and footpaths.
- 1.3 Document disclosure provided:
 - Topographical Site Survey by Tetlow King
 - Structural information provided by Tetlow King
- 1.4 The client provided the original site plans and locations of the trees, and these have been the basis for the production of subsequent plans. Whilst CBA Trees has had a limited input in defining the contents of the development plan, it broadly conforms to the requirements of section 4.1.5 of BS5837:2005.
- 1.5 Our advice has been sought on the principles of the development in relation to the potential impact on the existing tree stock, to inform and to facilitate the development layout that is acceptable in arboricultural terms.

2.0 CLIENT'S BRIEF

- 2.1 In line with our written quotation and verbal instructions, information has been compiled in accordance with British Standard 5837:2005 – *"Guide to Trees in Relation to Construction – Recommendations"* and current best practice advice.
 - To undertake a Tree Survey, appended at CB1.
 - To produce an AutoCAD Tree Survey Plan that relies on the accuracy of the (topographical) survey provided by the client. (Plan No.CBA7279.01 appended with the Tree Survey Schedule at CB1).
 - To produce a schedule of Root Protection Areas in accordance with BS5837:2005 Table 2, appended at CB2.
 - To undertake an arboricultural implications assessment (AIA) of the approved development provided by the client, to identify which trees will be lost, which can be retained and suggest mitigating build techniques in order to retain trees.
 - Based on the above and further on-going discussions, to provide an Arboricultural Development Statement detailing the methodologies for the retention, of the tree stock where feasible in relation to the approved development layout including a Tree Protection Plan (Plan No.CBA7279.03) appended at CB3.

3.0 DESCRIPTION OF THE SITE

- 3.1 The site currently consists of an area of compacted ground with sub-base material from previous hard surfacing. The boundaries to the site are to the West the footpath edge, to the North the grassed verge to the footpath and to the South and East garden boundaries. There are no trees located on-site; there are 3 (three) street trees located off-site close to the site boundary.

4.0 THE TREE STOCK

- 4.1 A tree survey was undertaken by CBA Trees on 27.2.09. The tree survey exercise identified 3 (three) individual trees; a tree survey schedule and plan (ref CBA7279.01) are appended at CB1.
- 4.2 CBA Trees is unaware that any of the trees subject to the planning application are protected by a Tree Preservation Order. It has not been confirmed by Arun District Council whether any of the trees within the site are also covered by a Conservation Area Order.
- 4.3 The client is advised to obtain written confirmation from Arun District Council, to establish the legal status of these trees prior to any works being undertaken, outside the remit of an approved planning application.
- 4.4 Tree Categorisation Method

Category R = Trees in such a condition that any value would be lost within 10 years, or should be removed for reasons of sound arboricultural management. There were 0 (zero) 'R' grade trees on or adjacent to the site at the time of surveying.

Note:

"Category R trees are those which would be lost in the short term for reasons connected with their physiological or structural condition. For this reason, they should not be a consideration in the planning process."

Category A = Trees of high quality and value: in such a condition as to make a substantial contribution, (40 years or more is recommended). There were 0 (zero) individual 'A' grade tree on or adjacent to the site at the time of surveying.

Category B = Trees of moderate quality and value, capable of making a significant contribution for in excess of 20 years. There were 0 (zero) individual 'B' grade trees on or adjacent to the site at the time of surveying.

Category C = Trees of low quality and value which might remain for a minimum of 10 years or young trees with stems of less than 150mm diameter. There were 3 (three) individual 'C' grade trees in total adjacent to the site at the time of surveying. These were trees 1, 2, and 3.

Note:

"Trees under these categories are trees that should be a material consideration in the development process; the subcategories are intended to reflect arboricultural, landscape and cultural values respectively."

- 4.5 The 3 (three) off-site street trees were all graded as 'C' grade trees, and consisted of a Silver Maple which had been pollarded in the past, a Fastigate Hornbeam and an Apple tree. All 3 (three) trees have a considerable amount of hard surfacing within their rooting zones, and have very small areas of soft surfaces to encourage root growth.
- 4.6 For a more details of the existing tree stock, refer to the Tree Survey Schedule (appended at CB1).

5.0 PROPOSED TREE RETENTION AND TREE LOSS

- 5.1 In accordance with the recommendations contained within BS5837:2005 "*Trees in Relation to Construction*", an experienced arboriculturist has assessed the requirements for tree protection and the Root Protection Area (RPA) (appended at CB2). The implications of the proposed development are detailed below, along with any mitigating measures to ensure the retention of these trees.
- 5.2 Details of service location proposals have not been forwarded to CBA Trees at the time of compiling this assessment. It is however assumed, given the location of the trees, that services will be installed outside the root protection areas of retained trees, and connected to the existing where practicable.
- 5.3 As part of the assessment, dimensions have been scaled from the proposed development drawing number PL081005, SL.01 prepared and modified, to include the relevant Tree Survey data and the information as shown on plan number CBA7279.03, appended at CB3.

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5.4 Summary of the implications for the trees and groups:

Tree No.	Species	BS 5837 2005 Cat	Potential cause of harm	Implication	Mitigation
1	Silver Maple	C1	<ul style="list-style-type: none"> North-west corner of plot 5 is located approximately 1m by 3.5m in extremity of RPA. Construction in proximity to tree. Hard surfacing located within RPA. Removal of hard surfacing within RPA to form soft landscaped area. 	<ul style="list-style-type: none"> Minor root severance Further ground compaction reduced root function. Root disturbance, reduced root function 	<ul style="list-style-type: none"> Retained arboriculturalist to be present when foundations excavated within RPA. See paragraph 5.5. Ground protection to be installed during construction within RPA. See Tree Protection Plan. Tree protective fencing to be installed during construction and moved back to install new hard surfacing and soft landscaping. See Tree Protection Plan. Hard surfacing utilising existing compacted sub-base. Excavations within RPA done by hand to install soil for soft landscaping. Retained arboriculturalist to be present during any excavations within RPA.
2	Fastigate Hornbeam	C1	<ul style="list-style-type: none"> Removal of hard surfacing within RPA to form soft landscaped area Construction within proximity of tree 	<ul style="list-style-type: none"> Root disturbance, reduced root function 	<ul style="list-style-type: none"> Excavations within RPA done by hand to install soil for soft landscaping. Retained arboriculturalist to be present during any excavations within RPA. Tree protective fencing to be installed during construction and moved back to install new hard surfacing and soft landscaping. See Tree Protection Plan.

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Tree No.	Species	BS 5837 2005 Cat	Potential cause of harm	Implication	Mitigation
3	Apple	C1	<ul style="list-style-type: none"> Removal of hard surfacing within RPA to form soft landscaped area Part of footpath located within RPA Construction within proximity of tree 	<ul style="list-style-type: none"> Root disturbance, reduced root function 	<ul style="list-style-type: none"> Excavations within RPA done by hand to install soil for soft landscaping. Retained arboriculturalist to be present during any excavations within RPA. Footpath to utilise the existing compacted sub-base. Tree protective fencing to be installed during construction and moved back to install new hard surfacing and soft landscaping. See Tree Protection Plan.

- 5.5 The North-west corner of plot 5 encroaches approximately 1m by 3.5m in the extremity of Tree 1's Root Protection Area (RPA) (see Tree Protection Plan). This encroachment within the RPA should not be detrimental to the long term health of Tree 1, as the area encroached calculates to around one percent of the total RPA and is also at the extremity of the RPA. The ground is compacted as it was previously the hard standing forecourt of a garage, therefore one would assume that root growth in this direction from the tree would be restricted, due to the large area of unfavourable rooting conditions found, and root growth would be more concentrated to the grassed footpath verge. Given these circumstances, it would be unlikely that any substantial roots are found in the area where the building footprint encroaches within the RPA. As part of the proposals, a soft landscaped area is proposed adjacent to Tree 1, which will encourage root growth and enlarge the existing grassed area. To ensure that no substantial roots are damaged during foundation construction, the retained arboriculturalist should be present to prune any non-substantial roots encountered.

PART 2 ARBORICULTURAL/CONSTRUCTION METHOD STATEMENTS

6.0 PRE-COMMENCEMENT SITE MEETING

6.1 Pre-commencement site meeting

A pre-commencement site meeting shall be held prior to any works commencing on site, to agree all approved processes with the Arboricultural Consultant, the construction personnel and Arun District Council. This meeting could be used to formally agree the tree protection measures prior to commencement of the development and the associated clearance work.

7.0 PRE-DEVELOPMENT TREE WORKS

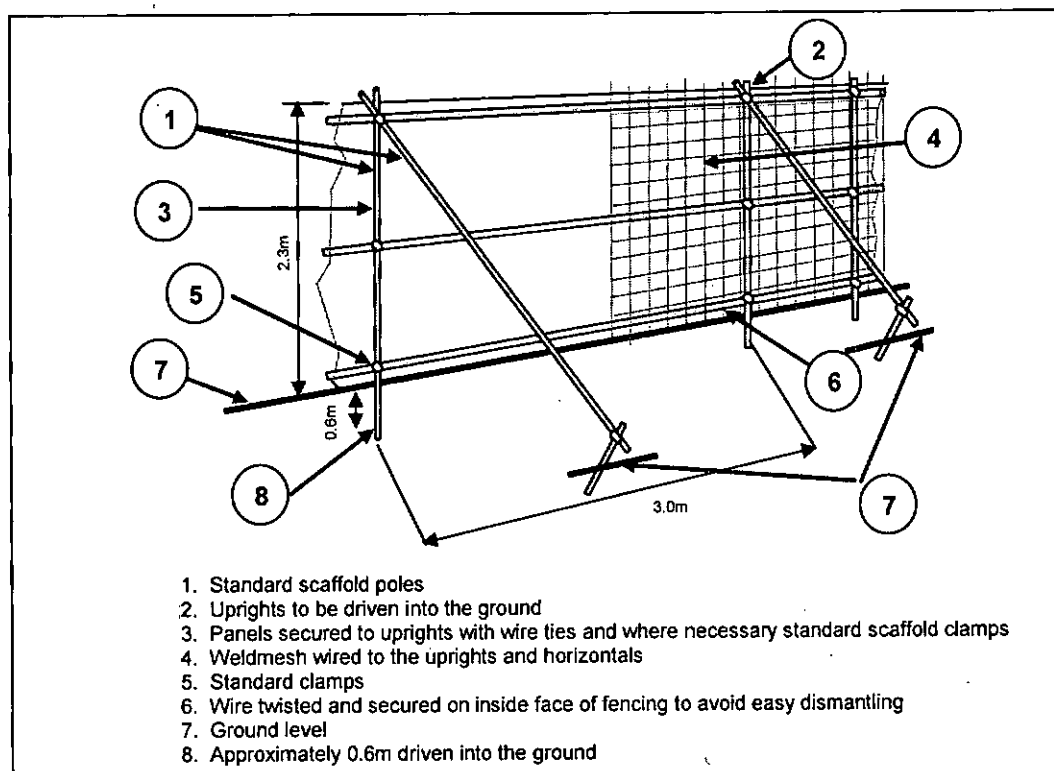
- 7.1 All tree works will be undertaken prior to the commencement of site preparation and construction works.
- 7.2 All permitted or approved tree work should be carried out in accordance with the British Standard "*Recommendations for Tree Work*" BS3998:1989, by suitably qualified and experienced professional arborists. Under no circumstances shall site personnel undertake any tree pruning operations. All tree surgery works should be carried out prior to the development of the site, and erection of protective fencing.
- 7.3 With regard to the trees to be retained, if protected by a Tree Preservation Order or within a Conservation Area, prior approval from Arun District Council will be required, if any works to these trees are proposed prior to full planning permission being granted detailing the approved tree works.
- 7.4 Consideration should be given to the timing of the proposed tree works to avoid the active growing period of trees. Therefore, all tree work should ideally be carried out during the dormant period from November through to February and then again from June to August. Consideration should also be given to nesting birds, and tree works should not normally be undertaken between March and May; however, care should be taken to inspect trees during the summer months for evidence of nesting birds. Although not apparent at the time of the site visit, consideration should also be given to the presence of bats, and a full visual assessment should be undertaken before any works are carried out on the trees. Where bats are identified as a serious concern, a bat survey should be undertaken by qualified and trained personnel to identify the needs of the bats (roosts, resting place etc) and no tree works can be carried out until the 'all clear' is given, or a programme of recommendations is received in writing.
- 7.5 Should additional tree works become apparent during the construction process; written consent will be required from Arun District Council prior to these additional works being undertaken.
- 7.6 All tree works that are required to facilitate the development are detailed within the Tree Works Schedule appended at CB4.

8.0 TREE PROTECTION MEASURES

8.1 Tree Protective Fencing and Tree Protection Plan

- 8.1.1 The protective fencing shall be erected in accordance with the location set out on the Tree Protection plan ref: CBA7279.03, which is appended at CB3, and will be erected prior to any site works. A copy of the Tree Protection Plan shall be made available for all site staff to see.
- 8.1.2 The barrier is to comprise of a vertical and horizontal framework, well braced to resist impacts, with vertical tubes spaced at a maximum interval of 3m. Onto this, weldmesh panels will be fixed securely with wire or scaffold clamps (Figure 1 below and figure 2 of BS5837:2005). Weldmesh panels on rubber or concrete feet are not resistant to impact, and should not be used in close proximity to the development

Figure 1: Tree Protective fencing specification



- 8.1.3 Once the fencing is in place it must remain *in-situ* throughout the following phases of the development/construction:

- Contractor occupancy
- Plant and Materials delivery
- Construction works
- Installation of porous surfacing
- Utility installation
- Completion of development
- Landscaping

- 8.1.4 The area within the Construction Exclusion Zone (CEZ) will be regarded as **sacrosanct**, and the tree protective fencing shall not be taken down or relocated at any time without the written approval of Arun District Council, except where

prior approval has been granted to carry out operations as detailed within this report. See Tree Protection Plan CBA 7279.03.

8.2 Additional arboricultural advice for site personnel

8.2.1 To provide site personnel with additional information regarding the requirements of Tree Protection, a leaflet, appended at CB4 shall be issued to all staff at the time of their site induction. Spare copies of this leaflet shall be available in the site office as replacements.

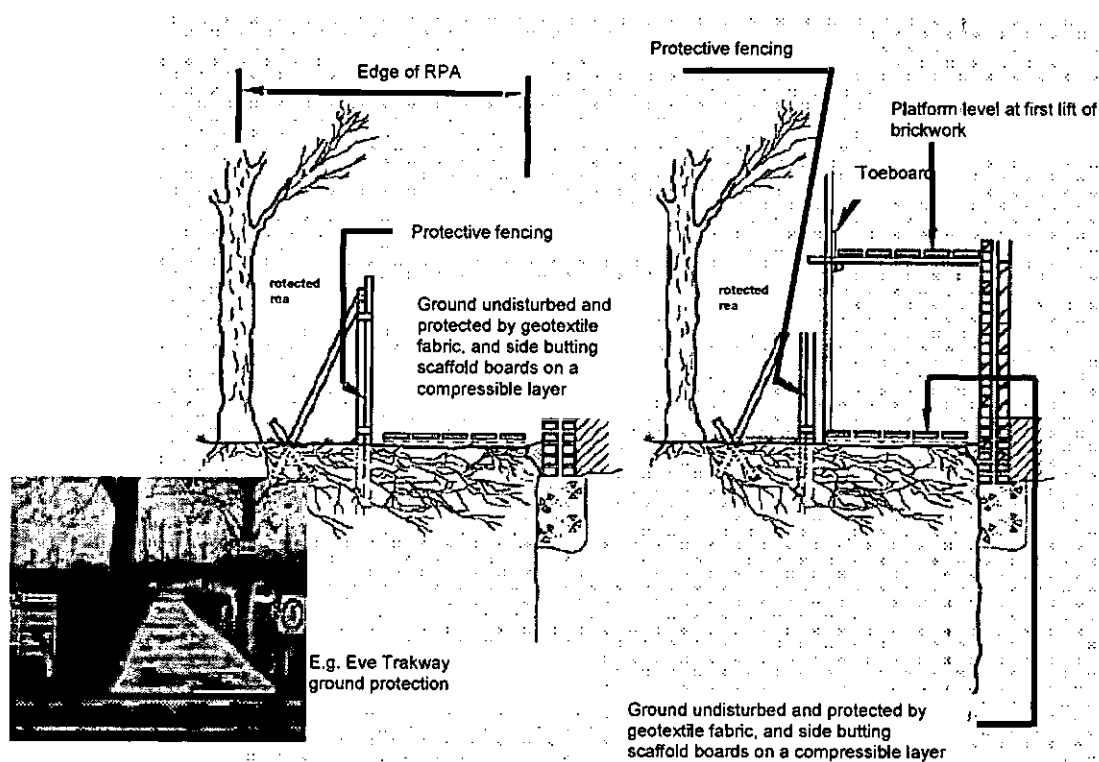
8.2.2 In order to inform site personnel of the purpose of the fencing, information notices shall be fixed to the fencing at 5m intervals. These notices shall be of all-weather construction and shall be substantially in the form of the specimen provided at appendix CB4, and shall be replaced as and when necessary.

8.3 Ground protection and scaffolding specification

8.3.1 In addition, ground protection will be implemented, similar to that shown in Figure 3 of BS5837:2005, and illustrated as figure 2 below, for the area within the Root Protection Area, to allow for construction and working space. This is necessary to provide working space for construction activities, which may include implementation of foundations, and for the erection of scaffolding to aid in building. This will also be required when footpaths are installed within the root protection zone.

8.3.2 Additional heavy-duty ground protection may, in some circumstances, be required. This is feasible through the use of concrete slabs or heavy duty boarding (e.g. Eve Trakway) to enable a higher level of ground protection of the tree's rooting area, and to reduce the potential for damage and compaction.

Figure 2: BS5837:2005 Ground protection and Scaffolding



Pedestrian movements

Section 9.3.2 *"For pedestrian movements within the RPA, the installation of ground protection in the form of a single thickness of scaffold boards, on top of a compressible layer laid onto a geotextile, or supported by scaffold may be acceptable".*

9.0 GENERAL CONSIDERATIONS WITHIN AND OUTSIDE THE CONSTRUCTION EXCLUSION ZONE

9.1 Construction Exclusion Zone (CEZ)

9.1.1 Inside the Construction Exclusion Zone (CEZ) formed by the protective fencing and ground protection measures, the following prohibitions shall apply:

- **No construction activity will occur within the CEZ unless otherwise stated in this report or agreed in writing with Arun District Council prior to the specific activity taking place.**

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

- Materials, which will contaminate the soil e.g. concrete mixing, diesel oil and vehicle washings, shall not be discharged within 10 metres of the tree stem. This should take into consideration the topography of the site and slopes, to avoid materials such as concrete washings running towards trees.
- Fires shall not be lit in a position where their flames can extend to within 5 metres of foliage, branches or trunk. This will depend on the size of the fire and the wind direction.
- Notice boards, telephone cables or other services shall not be attached to any part of the tree. (See appendix CB5 Common Causes of Damage During Construction Works)

10.0 REMOVAL OF HARD SURFACES/BUILT FORM IN CLOSE PROXIMITY TO RETAINED TREES

10.1 Removal of existing surfacing, built forms or other excavations within the Construction Exclusion Zone of retained trees, must be undertaken by hand (where feasible and in line with Health and Safety policies) to avoid any surface root damage, and shall be supervised on-site by the Retained Arboricultural Consultant.

10.2 Any removal of hard surfacing, built form or other excavations in close proximity to trees will be undertaken by working only from the existing hard surface or protected ground area. The required work should then be completed with hand operated tools or appropriate machinery, but under the supervision of an arboriculturist. Any machinery or equipment to be used will need to be lightweight and run on additional ground protection, or working from the existing hard standing only.

10.3 If the area of the zone of protection around the retained trees is to be left following the removal of the existing hard surface, and before a new hard surface

is laid, or the area receives soft landscaping treatment, then ground/tree protection MUST be correctly re-established immediately the hard surface removal work has been completed.

- 10.4 If there is a delay, for whatever reason, and the area that was previously protected by hard surfacing is left exposed awaiting a new surface, a temporary surface must be implemented, and/or Hessian sacking must be placed over any exposed roots.

11.0 INSTALLATION OF HARD SURFACES WITHIN CLOSE PROXIMITY TO RETAINED TREES

- 11.1 The installation of hard surfacing to form driveways and footpaths within the Root Protection areas of retained trees, where there is an existing compacted sub-base, will utilise the existing to reduce root disturbance. The tree protective fencing will be moved back to a new position to allow space for hard surface installation. Tree protective fencing locations are shown on Tree Protection Plan CBA7279.03. The Existing sub-base should be made level with minimal ground disturbance and resurfaced. This shall be supervised by the retained arboriculturalist.

12.0 PHASING OF DEVELOPMENT

- 12.1 The process of the development should follow that of Figure 1 of BS5837:2005 (appended at CB5), in addition to any additional site-specific considerations and factors that need to occur, or be implemented in any one phase.

13.0 CONSTRUCTION WORK TIMINGS

- 13.1 This is for determination by Arun District Council.

14.0 VEHICULAR MOVEMENTS

- 14.1 There should be minimal vehicular movement in the rooting zone outside the Root Protection zone.
- 14.2 It is not anticipated that there will be a need for excess vehicular movement near the retained trees, given that there are established access areas.

15.0 SITING OF TEMPORARY OFFICES, TOILETS AND MATERIAL STORAGE COMPOUNDS

- 15.1 It is anticipated that all storage materials and deliveries shall make use of the existing access and gravel driveway area within the site confines, in order to avoid unnecessary damage to tree roots.
- 15.2 The locations shall be agreed in writing with Arun District Council prior to the actual undertaking, and will remain in only those agreed locations throughout the construction phases. If an alternative location is required, this must be agreed in writing with Arun District Council. This will also include the delivery; storage and movement of all essential facilities, as well as aspects such as temporary

contractor vehicle parking and site location of chemical mixing (e.g. concrete). All such locations will be outside of the Root Protection Areas and avoid areas where 'run off' of chemicals may flow into root protection areas.

15.3 Site Huts

All site huts (if required) that are to be situated on ground that is not existing hard surfacing, shall have appropriate footings or be situated on a temporary surface, which will aid in reducing the potential for compaction of the ground where they are in close proximity to the existing tree protective fencing line. Site huts can be used as part of the protective fencing boundary and in some cases can be beneficial.

15.4 Material Storage

This shall be accommodated outside of the Construction Exclusion Zone, particularly to avoid harmful spillages of fuel, or phytotoxic substances that may damage the health of retained trees.

16.0 UTILITY SERVICE CONNECTIONS

- 16.1 The following services will avoid the Root Protection Areas of trees and their roots where feasible, given site constraints:

<i>Foul and surface water drains</i>	<i>Electricity</i>
<i>Land drains</i>	<i>Telephone</i>
<i>Soakaways</i>	<i>Lighting</i>
<i>Gas</i>	<i>Signage</i>
<i>Oil</i>	<i>Water</i>

- 16.2 The location of all new service routes will be outside of the Root Protection Areas of the trees to be retained on-site, to avoid disturbance of tree roots and ensure their healthy retention.
- 16.3 If services must unavoidably be installed within the RPA of retained trees, works will be carried out using trenchless techniques such as moling, laser guided boring and/or in accordance with advice appended at CB6.

17.0 SITE MONITORING AND SUPERVISION

- 17.1 On-going arboricultural site monitoring for the duration of the proposed development will be carried out by the retained arboricultural consultant approved by Arun District Council.
- 17.2 This work will be undertaken by a qualified and experienced arboriculturist at pre-determined and agreed time intervals. It will take the form of regular inspections (to be agreed, but at least one visit per month during the construction phase of the development is advised), on-going liaison with all personnel involved in the site development, Arun District Council and its Tree Officer.

Examples of when an Arboriculturist would be required on site:

- ❖ *Inspection of the tree protective fencing*
- ❖ *Any works within the root protection areas of retained trees*

- 17.3 Any defects requiring rectification shall be notified to the Contractor/Site Manager and the client.
- 17.4 In addition, it is proposed that a site logbook is kept to record all stages of the development from the erection of the protective fencing, right through to the completion of the project. This will be made available to Arun District Council if required, to show evidence of site monitoring.

Example pro-forma

Date	Activity	Checked	Comments/ damage noted	By whom	Signed	Action taken
13/03/08	Erection of protective fencing					
20/03/08	Inspection of protective fencing					

- 17.5 Arun District Council's Tree Officer (or appropriate representative) will have free access to the site, and will report on any problem areas directly to the developer's retained arboriculturist, who will then visit the site and make recommendations to the developer on how best to rectify the situation and ensure the implementation.

18.0 AVOIDING DAMAGE TO STEMS AND BRANCHES

- 18.1 Care shall be taken when planning site operations, to ensure that wide or tall loads or plant with booms, jibs and counterweights can operate without coming into contact with retained trees. Such contact could result in serious damage to them, and might make their safe retention impossible. Consequently, any transit or traverse of plant in close proximity to trees should be conducted under the supervision of a banksman, in order to ensure adequate clearance from trees is maintained at all times.

19.0 REPORT DAMAGE TO TREES AND TREE PROTECTION FENCING

- 19.1 Should any damage be caused to trees noted for retention, either by the above works or as the result of any other action, the damage should be reported to the site supervisor immediately. The site supervisor shall report up the chain of responsibility to the retained consultant arboriculturist, or in the absence of such an appointment, to an appropriately qualified arboriculturist, to enable remedial measures to be implemented as necessary and as agreed with Arun District Council.
- 19.2 Should protective fencing become damaged so as to impair its function in protecting trees, all work shall cease in the vicinity of the damage, until the fence has been returned to standard.

20.0 REMOVAL OF PROTECTIVE FENCING

- 20.1 When the development phase is complete, all drainage and service runs are in place, all site machinery has been removed and any landscaping for the principal area of the site has been implemented, the protective fencing will be dismantled. For certain operations, such as installation of new hard surfaces utilising the existing sub base and installing soft landscaping on previous hard standing within Root Protection Areas will require the Tree Protective Fencing to be relocated

during site construction. Full details of Tree Protective Fencing location can be found on Tree Protection Plan CBA7279.03

- 20.2 This fence dismantling must be undertaken with great care, and will need to be supervised to avoid heavy machinery being used within the root protection areas. Hoarding, scaffolding and other fencing materials will need to be removed from site immediately.

21.0 COMPLETION MEETING

- 21.1 Upon completion of all the works specified above, and in line with procedures also specified, the retained arboricultural consultant will invite Arun District Council's Tree Officer to meet on site, to discuss the project and to agree on any remedial works required.

22.0 FUTURE MANAGEMENT AND POST DEVELOPMENT TREE MANAGEMENT

- 22.1 The site owner will be under an obligation to maintain and manage the tree stock on-site, and should seek to address this obligation through having regular tree inspections by a suitably qualified arboricultural consultant.
- 22.2 At Section 15 of BS5837:2005 emphasis is placed on the aftercare of trees following completion of development works. Whilst we support these recommendations, this is a matter for our clients to consider and for Arun District Council to determine whether they wish to apply a Condition relating to this aspect of work.

Section 15 Post development management of BS5837:2005

15.1 Existing trees

15.1.1 *Trees growing on a site before development takes place may, if adversely affected, be in decline over a period of several years before they die. This varies greatly depending on the age, species and condition of the tree, the soil conditions, climate, and the extent of damage incurred during development. A programme of inspections and necessary work for the treatment of symptoms as they develop should be drawn up in conjunction with an arboriculturist. This programme may include recommendations for frequency of inspection and/or beneficial tree work and should take the form of an arboricultural management plan.*

15.1.2 *Where the trees in question are protected by planning controls, the planning authority should be informed and any necessary agreements obtained prior to such work.*

15.1.3 *Prior to handover, following completion of development, the arboriculturist should look for signs of intolerance to the change in conditions and the effect of the development and any accidental damage to identify the need for further tree works in addition to those originally specified at the beginning of the development process.*

15.1.4 *An arboriculturist should consider appropriate cultural operations. These may include irrigation, or measures to enhance the soil structure and organic nitrogen levels in the soil.*

15.1.5 *Where the development design incorporates the need for active management following the completion of construction works, a tree or landscape management plan should be prepared and a copy supplied to all parties who may have an interest in the future management of the site or parts of it.*

15.2 New plantings

Maintenance of newly planted trees is of particular importance during the critical establishment period, of at least two years and may, where required by planning conditions, be five years or more following planting. A detailed maintenance schedule covering the establishment period should be prepared in conjunction with the landscape design proposals and appropriate arrangements made for its implementation.

23.0 CONCLUSIONS

- 23.1 The development proposals for the construction of 11 (eleven) dwellings with gardens, car parking and associated driveways and footpaths have been assessed broadly in accordance with British Standard 5837:2005 – *"Trees in Relation to Construction – Recommendations"*.
- 23.2 It is our opinion that the trees identified for retention can be afforded due respect and provided adequate protection, ensuring their safe and healthy retention during the development process.
- 23.3 A total of 3 (three) individual trees can be retained within the development as detailed within this report.
- 23.4 Provided the recommendations included within this report are strictly adhered to, CBA Trees believes the trees highlighted for retention within this report can be retained without undue stress on their long-term health.

24.0 CONTACT LIST

- 24.1 It is suggested that points of contact and lines of communication are established prior to commencement of the works on site including:-
- Arboricultural Consultant
 - Project Architect
 - Highways Engineer
 - Structural Engineer
 - Landscape Architects
 - Arun District Council's Tree Officer
 - Arun District Council's Planning Case Officer
 - Site Supervisor and Foreman
- 24.2 It is advised that the Site Supervisor establishes their own listing of contact details at the Pre-Start site meeting, and displays this in their office for general use as necessary.

25.0 BIBLIOGRAPHY

- British Standard 5837:2005 –
"Trees in Relation to Construction – Recommendations"
- British Standard 3998:1989 –
"Recommendations for Tree work"
- National Joint Utilities Group Publication Volume 4 –

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"Guidelines for the planning, installation and maintenance of utility services in proximity to trees"

- Wildlife and Countryside Act 1981
- Town and Country Planning Acts

