



April 2017
CBA10552 v1E

PMC Construction &
Development Services Ltd

ARBORICULTURAL DEVELOPMENT STATEMENT

Site:
Land adjacent Blendworth Crescent,
Havant,
PO9 2BA



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The Complete Arboricultural Consultancy

ARBORICULTURAL STATEMENT

Client:	PMC Construction & Development Services Ltd
Site:	Land adjacent Blendworth Crescent, Havant, PO9 2BA
Arboricultural Consultant:	James Fuller <i>FdSc.Arb, BTEC Nat.Dip.Arb, M.Arbor.A</i>
Date:	April 2017

SUMMARY

The proposal is for the construction of a residential development consisting of 51 (fifty one) units and 89 (eighty nine) car parking spaces at land adjacent to Blendworth Crescent, Havant, PO9 2BA.

This Arboricultural Statement demonstrates the protection measures for the retained trees and should be read in association with the Tree Protection Plan CBA10552.02B TPP. This report 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 BS5837:2012 and current best practice.

A total of 9 (nine) individual trees, 3 (three) groups of trees and 1 (one) hedge can be retained within the proposed development as detailed within this report.

A further 2 (two) groups of trees (Groups 4 and 5) can be retained in part.

There are 2 (two) individual trees and 2 (two) groups of trees that will be removed to facilitate the proposed development, and allow reasonable and usable garden space.

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 including Root Protection Area Schedule
CB2	Tree Survey Plan CBA10552.01 TSP
CB3	Tree Protection Plan CBA10552.02B TPP
CB4	Pre-Commencement Tree Works Schedule

GUIDING PRINCIPLES/APPENDICES:

CB5	Tree Protection Guidance Leaflet
	Construction Exclusion Zone Site Notice
	Common Causes of Damage During Construction Works
CB6	Qualifications and Experience

PART 1

ARBORICULTURAL IMPLICATIONS ASSESSMENT

1.0 INTRODUCTION

- 1.1 There is a development proposal for land adjacent to Blendworth Crescent, Havant, PO9 2BA. The site is located on the southern side of Blendworth Crescent, just to the north of Trosnant Junior School.
- 1.2 The proposal is for the construction of a new residential development, which consists of 51 (fifty-one) units and 89 (eighty nine) car parking spaces.
- 1.3 Document disclosure provided:
 - Topographical Site Survey (Ref 1509s010W)
 - Drainage details provided by Arch Associates (Ref PMC238/501 D)
- 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 BS5837:2012 *"Trees in Relation to Design, Demolition and Construction – Recommendations"* and current best practice advice.
- 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 BS5837:2012 and current best practice advice.
 - To undertake a Tree Survey (schedule including Root Protection Areas appended at CB1).
 - To produce a Tree Survey Plan that relies on the accuracy of the topographical survey provided by the client. (Plan CBA10552.01 TSP appended at CB2).
 - To undertake an Arboricultural Implications Assessment (AIA) of the proposed 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 Statement detailing the methodologies for the retention of the tree stock where feasible, in relation to the proposed development layout including a Tree Protection Plan CBA10552.02B TPP appended at CB3.
- 2.2 The advice provided is in support of the current planning application and has been formulated without discussion with the main construction contractors who at this stage have not been appointed. Once the main contractors are appointed, amendments to this Method Statement may be required for construction purposes. All amendments will be assessed by the retained arboricultural consultant and proposed in writing by Havant Borough Council.

3.0 DESCRIPTION OF THE SITE

3.1 The site is accessed via an existing footpath from Blendworth Crescent. The site is an open area of grassland with a central area of hard standing, which is thought to have been an old play area. All the existing trees and groups are located around the periphery of the site. There are 4 (four) existing large dominant trees located on the north-east, south and west boundaries.

3.2 **Photograph 1:** A view of the existing site access from Blendworth Crescent



3.3 **Photograph 2:** A view of the eastern side of the site



3.4 Photograph 3: A view of the western side of the site



4.0 THE TREE STOCK

4.1 A tree survey was undertaken by CBA Trees on the 5th February 2016 that identified 11 (eleven) individual trees, 7 (seven) groups of trees and 1 (one) hedge. The Tree Survey Schedule is appended at CB1 and Tree Survey Plan (CBA10552.01 TSP) is appended at CB2.

4.2 Tree Categorisation Method

Category U = 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 no 'U' grade trees on or adjacent to the site at the time of surveying.

Note: BS5837:2012 states -
"Category U trees are 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."

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 3 (three) individual 'A' grade trees on the site at the time of surveying (Trees 3, 6 and 11).

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ARBORICULTURAL IMPLICATIONS ASSESSMENT

Category B = Trees of moderate quality and value, capable of making a significant contribution for in excess of 20 years. There was 1 (one) individual 'B' grade trees on the site at the time of surveying (Tree 8).

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 7 (seven) individual 'C' grade trees, 7 (seven) 'C' grade groups of trees and 1 (one) 'C' grade hedge on or adjacent to the site at the time of surveying (Trees 1, 2, 4, 5, 7, 9 and 10, Groups 1-7 and Hedge 1).

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.

- 4.3 For more details of the existing tree stock, refer to the Tree Survey Schedule (appended at CB1).

5.0 TREE PRESERVATION ORDER/CONSERVATION AREA

- 5.1 Following consultation with Havant Borough Council, CBA Trees has been made aware that the site is not located within a Conservation Area.
- 5.2 Following consultation with Havant Borough Council, CBA Trees has been made aware that none of the existing trees are protected by Tree Preservation Order.

6.0 PROPOSED TREE RETENTION AND TREE LOSS

- 6.1 In accordance with the recommendations contained within BS5837:2012, an experienced arboriculturist has assessed the requirements for tree protection and the Root Protection Area (RPA). The implications of the proposed development are detailed below, along with any mitigating measures to ensure the retention of these trees.
- 6.2 As part of the assessment, dimensions have been scaled from the proposed site layout plan (Ref PMC238-501-D) by Arch Associates, which has been prepared and modified, to include the relevant Tree Survey data and the information as shown on Plan CBA10552.02B TPP, appended at CB3.
- 6.3 There are 2 (two) individual trees (Trees 4 and 5) and 2 (two) groups of trees (Groups 2 and 3) that will be removed to facilitate the proposed development, and allow reasonable and usable garden space. There are sections of Groups 4 and 5 that will be removed to facilitate the proposed pump station and access road (highlighted on the Plan CBA10552.02B TPP, appended at CB3).

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7.0 SUMMARY OF ARBORICULTURAL IMPLICATIONS

7.1 The following summary of implications relates to only those trees that will require mitigation measures to allow for construction operations. Trees and groups not listed below can be fully protected in accordance with BS5837:2012 as indicated on Plan CBA10552.02B TPP.

Tree No.	Species	BS 5837:2012 Cat	Potential cause of harm	Implication	Mitigation
1	Elder	C1	Proposed construction works in close proximity to trees, groups and hedge	- Retained. - Potential for damage to branches and encroachment into RPA's	- Tree Protection Barriers shall be erected around these trees, groups and hedge as detailed in Section 11 of this report in the location specified on the Tree Protection Plan CBA10552.02B TPP appended at CB3. - Sections of Groups 4 and 5 that will be removed to facilitate the proposed pump station and access road (highlighted on the Plan CBA10552.02B TPP, appended at CB3).
2	Cypress	C1			
7	Sycamore	C1			
9	Bay	C1			
10	Common Ash	C1			
Grp 1	Privet	C2			
Grp 4	Blackthorn	C2			
Grp 5	Mixed Species	C2			
Grp 6	Hawthorn x 3	C2			
Grp 7	Cypress	C2			
H1	Hawthorn	C2			

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Tree No.	Species	BS 5837:2012 Cat	Potential cause of harm	Implication	Mitigation
3	Pedunculate Oak	A1	- Proposed construction works in close proximity to tree. - Proposed turning head and pump station access road located within RPA. - Proposed gates and posts located within RPA.	- Retained. - Potential for damage to branches and root severance.	- Phased Tree Protection Barriers shall be erected around this tree, as detailed in Section 11 of this report in the location specified on the Tree Protection Plan CBA10552.02B TPP appended at CB3. - Proposed turning head and pumping station access road shall be of a 'No Dig' construction with wildflower seed mix as detailed in section 12 of this report. Levels have been raised by 300mm to allow for the 'No Dig' construction - Proposed gates, fences and posts shall be installed as detailed within Section 13 of this report.

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Tree No.	Species	BS 5837:2012 Cat	Potential cause of harm	Implication	Mitigation
6	Pedunculate Oak	A1	- Proposed construction works in close proximity to tree. - Proposed footpaths within RPA - Proposed fence lines within RPA - Proposed timber sheds within RPA	- Retained. - Potential for damage to branches and root severance.	- Phased Tree Protection Barriers shall be erected around these trees, groups and hedge as detailed in Section 11 of this report in the location specified on the Tree Protection Plan CBA10552.02B TPP appended at CB3. - Proposed footpaths within RPA will be of a 'No Dig' construction as detailed in section 12 of this report. - Proposed fences shall be erected as detailed within Section 13 of this report. - Proposed timber sheds, shall be a simple construction that sit on top of the existing ground level. - Facilitation pruning works to be carried out as detailed within the Tree Works Schedule (TWS) appended at CB4.
8	Pedunculate Oak	B1	- Proposed construction works in close proximity to tree. - Proposed hard standing encroaches into RPA.	- Retained. - Potential for damage to branches and root severance.	- Phased Tree Protection Barriers shall be erected around these trees, groups and hedge as detailed in Section 11 of this report in the location specified on the Tree Protection Plan CBA10552.02B TPP appended at CB3. - Proposed hard standing to be excavated by hand under the supervision of the retained arboricultural consultant as detailed in section 14 of this report.

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<i>Tree No.</i>	<i>Species</i>	<i>BS 5837:2012 Cat</i>	<i>Potential cause of harm</i>	<i>Implication</i>	<i>Mitigation</i>
11	Pedunculate Oak	A1	- Proposed construction works in close proximity to tree. - Proposed hard standing encroaches into RPA. - Proposed sub station encroaches into RPA.	- Retained. - Potential for damage to branches and root severance.	- Phased Tree Protection Barriers shall be erected around these trees, groups and hedge as detailed in Section 11 of this report in the location specified on the Tree Protection Plan CBA10552.02B TPP appended at CB3. - Proposed hard standing and sub station to be excavated by hand under the supervision of the retained arboricultural consultant as detailed in Section 14 of this report. - Facilitation pruning works to be carried out as detailed within the Tree Works Schedule (TWS) appended at CB4.

8.0 PRE-COMMENCEMENT SITE MEETING

- 8.1 It is recommended that a pre-commencement site meeting is held prior to any works commencing on site, to agree all proposed processes with the arboricultural consultant, the construction personnel and Havant Borough Council. This meeting could be used to formally agree the methods of work, position of site offices, material storage, compounds, parking and tree protection measures prior to commencement of the development and the associated clearance work.
- 8.2 **General Site Management:** It is the developer's responsibility to ensure that the details of this arboricultural statement and any agreed amendments are known, understood and carried out by all site personnel.

9.0 ADDITIONAL ARBORICULTURAL ADVICE FOR SITE PERSONNEL

- 9.1 To provide site personnel with additional information regarding the requirements of Tree Protection, a leaflet (appended at CB5) 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.
- 9.2 In order to inform site personnel of the purpose of the barriers, information notices shall be fixed to the barriers at 5m intervals. These notices shall be of all-weather construction and shall be substantially in the form of the specimen provided at appendix CB5 and replaced as and when necessary.

10.0 PRE-COMMENCEMENT TREE WORKS

- 10.1 All tree works will be undertaken prior to the commencement of site preparation and construction works.
- 10.2 **All permitted or proposed tree work** should be carried out in accordance with the British Standard "*Recommendations for Tree Work*" BS3998:2010, by suitably qualified and experienced professional tree surgeon. 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 barriers.
- 10.3 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.
- 10.4 Due to the official bird nesting season considered to be from 1st March through to the 31st July (Natural England) depending on weather conditions, consideration must also be given to the potential for nesting birds. Therefore if tree work is to be carried out within June, July or August the project ecologist must be consulted to:

- Complete or advise on a pre-works survey which needs to be carried out by a suitably competent person. As a general rule, it should be assumed that birds will be nesting in trees, and it is down to contractors to assess, record and confirm that any works carried out in the management of trees and other vegetation has not disturbed actively nesting birds*.
- 10.5 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.
- 10.6 Should additional tree works become apparent during the construction process; written consent will be required from Havant Borough Council prior to these additional works being undertaken.
- 10.7 All tree works that are required to facilitate the development are detailed within the Pre-Commencement Tree Works Schedule appended at CB4.

11.0 TREE PROTECTION MEASURES

11.1 Tree Protection

Before starting works on site, tree protection will be installed in accordance with Tree Protection Plan CBA10552.02B TPP (appended at CB3). This will occur immediately following the completion of tree works and prior to any site preparation works starting.

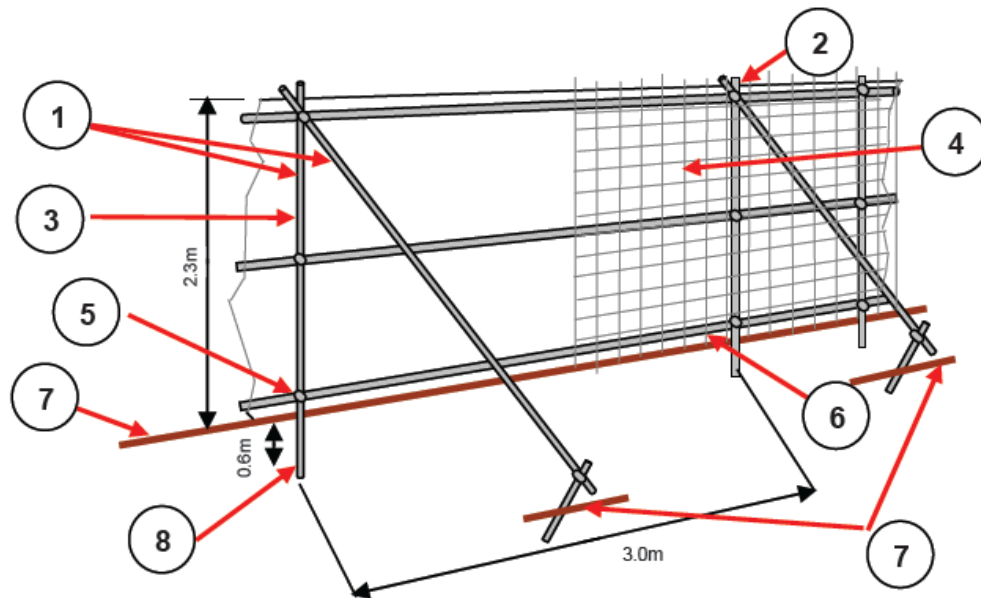
Trees 3, 8 and 11 have phased tree protection detailed due to construction works encroaching into the RPA's. The initial Tree Protection Barrier line shall be maintained for the duration of the development, until the specific works within the RPA are ready to be carried out. The Tree Protection Barrier shall then be moved to its secondary location.

It is recommended that a copy of the Tree Protection Plan is displayed in the site office and canteen as a point of reference for all site operatives.

11.2 Tree Protective Barrier

All the retained trees and groups are adjacent to areas of significant construction activity and will be protected by installing the following protective barrier in the location specified on the Tree Protection Plan CBA10552.02B TPP. 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 should be securely fixed with wire or scaffold clamps.

Figure 1: Protective Barrier



1. Standard scaffold poles
2. Uprights to be driven into the ground
3. Panels secured to uprights with wire ties and where necessary standard scaffold clamps
4. Weldmesh wired to the uprights and horizontals
5. Standard clamps
6. Wire twisted and secured on inside face of barriers to avoid easy dismantling
7. Ground level
8. Approximately 0.6m driven into the ground

Example of protective barrier:



Once the barriers are in place they must remain *in-situ* throughout the following:

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

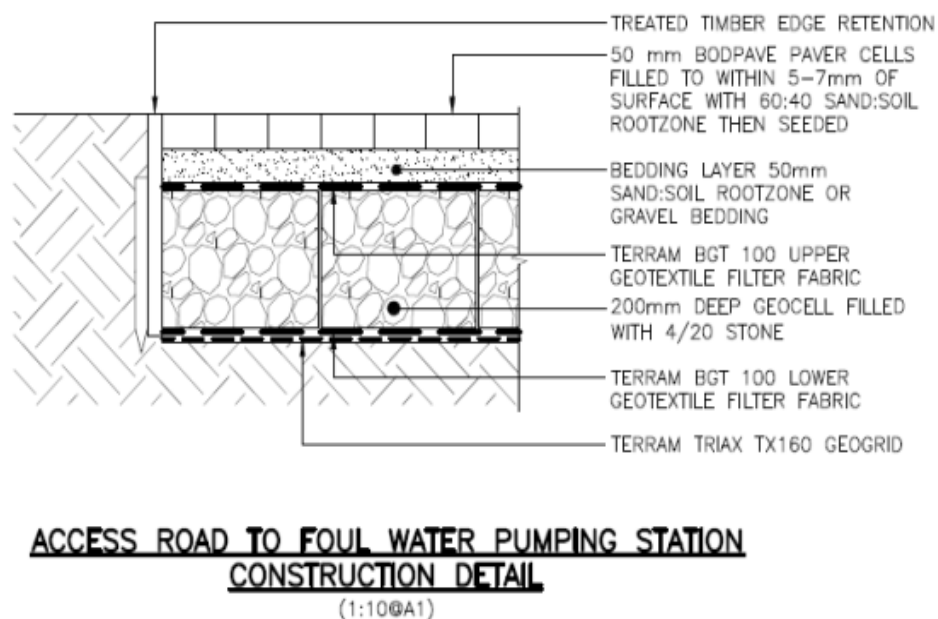
The area within the Tree Protection Barriers shall be known as the Construction Exclusion Zone (CEZ) and will be regarded as **sacrosanct**. The tree protective barriers shall not be taken down or relocated at any time without the written approval of Havant Borough Council. An example of a CEZ notice is appended at CB5.

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12.0 'NO DIG' HARD SURFACE

- 12.1 Plan CBA10552.02B TPP appended at CB3 indicates where no-dig hard surfaces are to be installed within the RPA's of retained trees. The 'No Dig' hard surface shall be created from Geosynthetics Cellular Confinement system, Cellweb or similar product.
- 12.2 The 'No Dig' hard surface shall be installed in accordance with the manufacturers method statement. New surfacing is proposed within the RPA's of Trees 3 and 6, which has the potential to cause harm if not specified and implemented with care. I have reviewed the levels in this area and it would be feasible to install a custom designed 'No Dig' specification surface without causing significant disturbance to the RPA's. The level within the RPA of Tree 3 has been raised by 300mm (10.50 Existing to 10.80 Proposed), with minor fluctuations across the proposed road. The footpaths within the RPA of Tree 6 shall be raised by 100mm.
- 12.3 I am confident that the proposed 'No Dig' hard surface can be installed without causing significant harm to the existing trees. This surface solution is within the recommendations set out in BS5837:2012 and would be appropriate in this situation.
- 12.4 **Figure 2:** Cross section of 'No Dig' hard surfaces for Trees 3 and 6 respectively



12.5 Introduction

This guidance describes the procedure required to undertake the construction of hard surfacing, i.e. patio, whilst exerting no adverse effects on the roots of trees to be retained. It is essential to maintain adequate supplies of water and oxygen for trees through the soil. Porosity is important, particularly where the new hard surface covers an area of previously unmade ground, under which tree roots may have developed. Where hard surfacing passes beneath the tree's canopy, or where it encroaches upon the Construction Exclusion Zone (CEZ) of retained trees, a porous 'no dig' method of construction will be required. The construction has been engineer designed and consists of a non-clogging gas and water permeable surface and sub-base. This will incorporate a three-dimensional cellular confinement system to prevent future rutting and underlying ground compaction.

The Tree Protection Plan CBA10552.02B TPP (appended at CB3) outlines areas where hard surfacing will be installed using a 'no-dig' specification.

12.6 Method of working

Responsibilities:

- The Site Supervisor shall be responsible for the overall implementation of this Method Statement
- The Site Supervisor shall be responsible for ensuring the work area has been CAT scanned, and services identified on the ground by a responsible person using equipment within calibration. All relevant service drawings will be checked, and any necessary trial holes will be excavated, but only under arboricultural on site supervision.
- CBA Trees have assessed the increase in levels and do not believe that it will have a detrimental impact on the retained trees.
- Under no circumstances, shall there be a decrease in levels through excavation within the Root Protection Areas of the trees.
- The Site Supervisor shall be responsible for the safe handling and distribution of materials around the site.
- The Site Supervisor shall be responsible for providing a completed Quality Assurance document at the conclusion of the scheme.

Materials:

- PPE as required by the Site Supervisor
- Cellular confinement system
- Stapler and staples
- Staking pins
- Separation geotextile membrane
- Edge restraints
- **Infill aggregate (angular granular 40-20mm no fines)**
- Wearing course

12.7 Method of Preparation

The Site Supervisor will set out the exact location of the area to receive the new surfacing.

Tree protective barriers shall be erected as per Tree Protection Plan (CBA10552.02B TPP, appended at CB3).

Following the CAT scan, the site supervisor will direct the implementation of the hard surfacing as per the following details.

The Site Supervisor shall ensure the prepared surface meets the necessary strength requirements prior to following works.

The Site Supervisor shall provide the setting out of any edging requirements.

12.8 Preparation of the surface for the cellular confinement system

Prior to the installation of a new ground surface, existing ground cover vegetation should be killed/destroyed using an appropriate herbicide (see Pesticide Handbook). Specialist advice should be sought in order to determine the most suitable herbicide treatment, due to the potential for leaching through the soil.

The soil surface will not be skimmed to establish new surfaces at the former ground level, as this has the potential to cause root damage. Therefore, loose organic matter and/or turf will be removed carefully using hand tools, and the new surface established above the former ground level, using a granular fill where required.

The ground levels are to be raised within the Root Protection Area (RPA). This will be achieved by the use of a granular material, which does not inhibit vertical gaseous diffusion. Examples of suitable granular materials include, no-fines gravel, washed aggregate, or cobbles.

No-fines granular materials should be used wherever fill or a sub-base is required, to ensure adequate gaseous diffusion.

12.9 Edge Supports

Timber edge – 50mm x 50mm tanalised timber stakes shall be hammered into the ground along the setting out line, at 900mm centres and at changes in direction. The finished level of the stakes shall be 25mm below the finished level of the edging timbers. Tanalised 25mm x 125mm timber rails shall be fixed across the stakes with appropriate fixings. The finished top of timber level shall be approximately 25mm lower than the adjacent finished ground level.

12.10 Construction

Lay geotextile membrane over prepared surface between edgings, ensuring overlaps of 300mm minimum. Temporarily retain geotextile with either stakes or weights.

Expand the cellular confinement system over the geotextile and anchor open with pins during infilling.

The expanded cellular confinement system panels shall be in-filled with the appropriate aggregate by hand, under the direction of the site supervisor. The cellular confinement system shall be overfilled by 50mm, to create a surcharge over the product, which protects the leading edges of the cells.

The infill aggregate shall be rolled or whacked to ensure cohesion of components.

12.11 Finishes

The Site Supervisor shall conduct a visual inspection of the finished surface structure prior to the application of any wearing course.

Any chosen porous wearing course for the car parking and driveways should be applied as per the instructions of the manufacturers involved.

A sacrificial surface shall be laid for the duration of the site works, which, once complete shall be removed and replaced with the chosen final surface.

12.12 Signing off

The Site Supervisor shall ensure that all waste material is removed from site.

The Site Supervisor shall provide the associated Quality Assurance document to the client.

The arboriculturist shall also sign off the works if present throughout the process to oversee the implementation.

13.0 INSTALLATION OF BOUNDARY FENCES, GATES AND POSTS

13.1 Site layout plan CBA10552.02B TPP indicates that boundary fences, gates and posts are proposed within the CEZ of Trees 3 and 6. Tree roots extend well in excess of the RPA of retained trees and are mainly located in the upper 600mm of soil. As such, even minor levelling and excavation can result in extensive damage to the root system. Inappropriate access within the CEZ for fence construction purposes can result in soil compaction and deterioration of the soil structure. Concrete used to support the posts is poisonous to plants and, if not controlled, can leach into the surrounding soil.

13.2 Post holes will be designed and constructed in accordance with the following specification:

- Postholes will be designed so as to minimise the need for excavation and allow minor variations of up to 300mm between post spacings to allow repositioning of posts to permit the retention of all roots, which are greater than 25mm which are discovered during the excavation of postholes within the RPA of retained trees.
- Postholes will be installed during period of dry weather so as to maintain soil structure and prevent compaction of the rooting environment.

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- Postholes within the RPA will be carefully excavated by hand to locate roots greater than 25mm in diameter. Postholes will be relocated to ensure that all roots over 25mm diameter are retained.
- Postholes within the RPA of retained trees will be lined with heavy gauge polythene to prevent contamination of the rooting environment.
- Bracing of posts off retained trees will not be permitted under any circumstances

14.0 EXCAVATIONS WITHIN RPA'S

- 14.1 Proposed hard standing has unavoidably been designed so that it encroaches into the RPA's of retained trees. Due to the location of the existing trees, hard standing has had to encroach into the RPA's. The encroachment has been kept to an absolute minimum and will not have a detrimental impact on the retained trees. Therefore the installation of this hard standing shall be carried out in a traditional manner. However, the excavations shall be carried out by hand and under the supervision of the retained arboricultural consultant.
- 14.2 Excavations within the CEZ of retained trees, must be undertaken by hand to avoid any surface root damage, and shall be supervised on-site by the retained arboricultural consultant.
- 14.3 Any excavations in close proximity to trees will be undertaken by working only from outside of the RPA, on existing hard surface or protected ground area. The required work should then be completed with hand-operated tools, but under the supervision of an arboriculturist.
- 14.4 The areas to be excavated shall be marked out on site by the retained arboricultural consultant and the site manager. Once this has been done, excavations will be carried out by hand, with any roots being pruned back to the edge of the excavated areas.

15.0 AVOIDING DAMAGE TO STEMS AND BRANCHES

- 15.1 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, will be conducted under the supervision of a banksman, in order to ensure adequate clearance from trees is maintained at all times.

16.0 SITING OF TEMPORARY OFFICES, TOILETS AND MATERIAL STORAGE COMPOUNDS

16.1 It is anticipated that all deliveries shall make use of the existing access, in order to avoid unnecessary damage to tree roots.

16.2 The locations of 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), will be outside of the RPAs, and avoid areas where 'run off' of chemicals may flow down hill into the RPAs of retained trees.

16.3 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 barrier line. Site huts can be used as part of the protective barrier boundary, and in some cases, can be beneficial where installation does not conflict with the aerial parts of the tree.

16.4 Material Storage

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

17.0 GENERAL CONSIDERATIONS WITHIN AND OUTSIDE THE CEZ

17.1 Inside the CEZ formed by the protective barrier, the following prohibitions shall apply:

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

17.2 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, branches, foliage or RPA. This should take into consideration the topography of the site, to avoid liquids such as concrete washings running down hill towards retained trees.
- Fires shall not be lit in a position where their flames can extend to within 10 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)

18.0 REPORT DAMAGE TO TREES AND TREE PROTECTION BARRIERS

- 18.1 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 arboricultural consultant, 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 Havant Borough Council.
- 18.2 Should damage occur to a protective barrier to impair its function in protecting trees, all work will cease near the damage, until the barrier has been returned to standard.

19.0 REMOVAL OF PROTECTIVE BARRIERS

- 19.1 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 barriers will be dismantled.
- 19.2 This barrier 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 barrier materials will need to be removed from site immediately.

20.0 CONCLUSIONS

- 20.1 The development proposals for the construction of a residential development consisting of 51 (fifty one) units and 89 (eighty nine) car parking spaces at land adjacent to Blendworth Crescent, Havant, PO9 2BA have been assessed broadly in accordance with BS5837:2012 *"Trees in Relation to Design, Demolition and Construction – Recommendations"*.
- 20.2 It is our opinion that the trees, groups and hedge identified for retention can be afforded due respect and provided adequate protection, ensuring their safe and healthy retention during the development process.
- 20.3 A total of 9 (nine) individual trees, 3 (three) groups of trees and 1 (one) hedge can be retained within the proposed development as detailed within this report. A further 2 (two) groups of trees (Groups 4 and 5) can be retained in part. There are 2 (two) individual trees and 2 (two) groups of trees that will be removed to facilitate the proposed development, and allow reasonable and usable garden space.
- 20.4 It is our opinion that the loss of the 2 (two) trees, 2 (two) groups of trees and sections of 2 (two) groups will not have a detrimental effect on the local visual amenity or significantly alter the visual treed character of the local area, if a landscaping scheme that includes quality trees, selected to suit the site conditions and the space available, is implemented.

PART 2

ARBORICULTURAL/CONSTRUCTION METHOD STATEMENTS

- 20.5 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.

21.0 CONTACT LIST

- 21.1 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
- Drainage Engineer
- Landscape Architects
- Havant Borough Council's Tree Officer
- Havant Borough Council's Planning Case Officer
- Site Supervisor and Foreman

- 21.2 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.

22.0 BIBLIOGRAPHY

- British Standard 5837:2012 –
"Trees in Relation to Design, Demolition and Construction - Recommendations"
- British Standard 3998:2010 –
"Recommendations for Tree Work"
- National Joint Utilities Group Publication Volume 4 –
"Guidelines for the planning, installation and maintenance of utility services in proximity to trees"
- Wildlife and Countryside Act 1981
- Conservation of Habitats and Species Regulations 2010 (as amended)
- Town and Country Planning Acts







The Professional Arboricultural Consultancy

TREE SURVEY NOTES

This Tree Survey has been undertaken within the recommendations of British Standards 5837:2012 and current arboricultural best practice.

- Each tree has been numbered and, where instructed, for future identification on site, has been tagged using small durable metal or plastic tags.
- Due to variations of existing ground levels through the site, height dimensions are estimated and are given in metres. Accurate heights, measured with the aid of optical instruments can be provided where instructed.
- Trunk/stem diameters are measured in mm at 1.5 metres above ground level, using a standard measuring tape as defined by British Standards, unless otherwise stated.
- Estimated branch spread is taken in metres from the centre of the trunk, at the four cardinal points of a compass, to achieve an accurate representation of the crown shape which will be recorded on the tree survey plan.

- An assessment of a tree's age classification is made in terms of its maturity within the site's landscape and defined as:

Y	=	young trees
SM	=	semi-mature trees
EM	=	early mature trees
M	=	mature trees
OM	=	over-mature trees

- An assessment of a tree's physiological condition is defined as:

Good	=	fully functioning biological system showing average vitality i.e. normal bud growth, leaf size, crown density and wound closure
Fair	=	fully functioning biological system showing below average vitality i.e. reduced bud growth, smaller leaf size, lower crown density and reduced wound closure
Poor	=	a biological system with limited functionality showing significantly below average vitality i.e. limited bud growth, small and chlorotic leaves, low crown density and limited wound closure
Dead	=	dead

- An assessment of a tree's structural condition is defined as:

Good	=	no significant structural defects
Fair	=	structural defects which could be alleviated through remedial tree surgery or management practices
Poor	=	structural defects which cannot be alleviated through tree surgery or management practices
Dead	=	dead

- An assessment of a tree's future life expectancy is defined as: **<10, 10+, 20+ or 40+ years.**

Categorisation of Trees

The category for each tree is assessed using the recommendations of BS5837:2012. The assessment has not considered any site-specific development proposals, but will have considered any changes on or off-site which may have an effect on the conditions surrounding the surveyed trees.

The trees have been classified into one of the following categories (and one or more sub-categories [this will however not increase the value of the tree]) and are indicated on the associated drawings by colours as indicated.

Category U				Identification colour on plan
Trees 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			DARK RED
Category A	1 – Mainly arboricultural values	2 – Mainly landscape values	3 – Mainly cultural values	Identification colour on plan
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	Trees, groups or woodlands, of significant conservation, historical, commemorative or other value (e.g. veteran trees or wood-pasture)	LIGHT GREEN
Category B	1 – Mainly arboricultural values	2 – Mainly landscape values	3 – Mainly cultural values	Identification colour on plan
Trees of moderate quality with an estimated remaining life expectancy of at least 20 years	Trees that might be included in category A, but are down-graded because of impaired condition (e.g. presence of significant though remediable defects, including unsympathetic past management and storm damage), such that they are unlikely to be suitable for retention for beyond 40 years; or trees lacking the special quality necessary to merit the category A designation	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	Trees with material conservation value or other cultural value	MID BLUE
Category C	1 – Mainly arboricultural values	2 – Mainly landscape values	3 – Mainly cultural values	Identification colour on plan
Trees of low quality with an estimated remaining life expectancy of at least 10 years, or young trees with a stem diameter below 150mm	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	GREY

Clients are advised that Tree Surveys are a basic data collection exercise and record of tree condition at the time of survey. This will identify any visible signs of ill-health or major defects, advising a further detailed investigation where appropriate. This will most often take the form of a request for either “*full ground level inspection*” or “*climbing inspection required*”. There may also be a further reference to the need for “*decay detection equipment*” to aid diagnosis. A tree survey does not include a comprehensive schedule or specification of remedial tree works, but may contain a guide to the work which might be undertaken by a prudent tree owner, purely for reasons of health and safety.

A Tree Survey should not be confused with a Tree Inspection or Arboricultural Implication Assessment, which are totally separate exercises.

	BS5837:2012 TREE SURVEY REPORT	
	Site:	Land adjacent Blendworth Crescent, Havant, PO9 2BA
	Date:	05 February 2016
	Consultant:	James Fuller <i>FdSc.Arb, BTEC Nat.Dip.Arb, TechArbor.A</i>
	Tagged:	No

Notes:

1. It may be advised that some trees should have the ivy removed to enable a re-survey to be carried out. This would also alleviate the tree from becoming suppressed; carrying additional weight that increases the chance of windthrow due to a larger dense crown area; and only receiving restricted light. Unless otherwise stated, in order to prevent regrowth, it is only necessary to remove a 300mm section of ivy and clear around the base.
2. It may be advised that it was only possible to estimate the diameter of some trees because of ivy smothering, dense vegetation, or trees located off-site with no access.
3. The estimated remaining contribution in years, and the tree grading category have been calculated for the current situation and may alter where further investigation works are advised.
4. Some trees or groups may have been given an interim grade. The reason for the interim grading is addressed in the timescales given as this may have a bearing on health and safety and/or any development proposals.
5. Tree Groups have been assessed with estimated and representative data.
6. This is not a Tree Works Schedule. Any preliminary management recommendations are listed in the interests of health and safety and should be carried out by a prudent tree owner.
7. Any management recommendations are suggested for reasons of health and safety only, regardless of development proposals at this stage. However, the defects requiring remedial tree surgery are by their very nature potential wildlife habitats, including protected species which needs consideration prior to any tree surgery works commencing.
8.
 - a) At this stage the Root Protection Area (RPA) information is for your guidance and ongoing discussion purposes only as it assumes that all but the 'U' grade trees will be retained, which may not be the case.
 - b) For all single stem trees with a stem diameter greater than 1250mm, and multi-stem trees with a stem diameter greater than 1500mm, the calculated RPA has been capped at 707m² in accordance with Section 4.6.1 of BS5837:2012.
9. Trees marked with * are indicatively plotted on the associated Tree Survey Plan.

TREE PRESERVATION ORDER/CONSERVATION AREA:

CBA Trees has been instructed to investigate whether trees on or adjacent to the site are protected by a Tree Preservation Order or located within a Conservation Area. The Local Authority has confirmed that no trees are protected by a Tree Preservation Order (TPO) and that the site is not located within a Conservation Area.

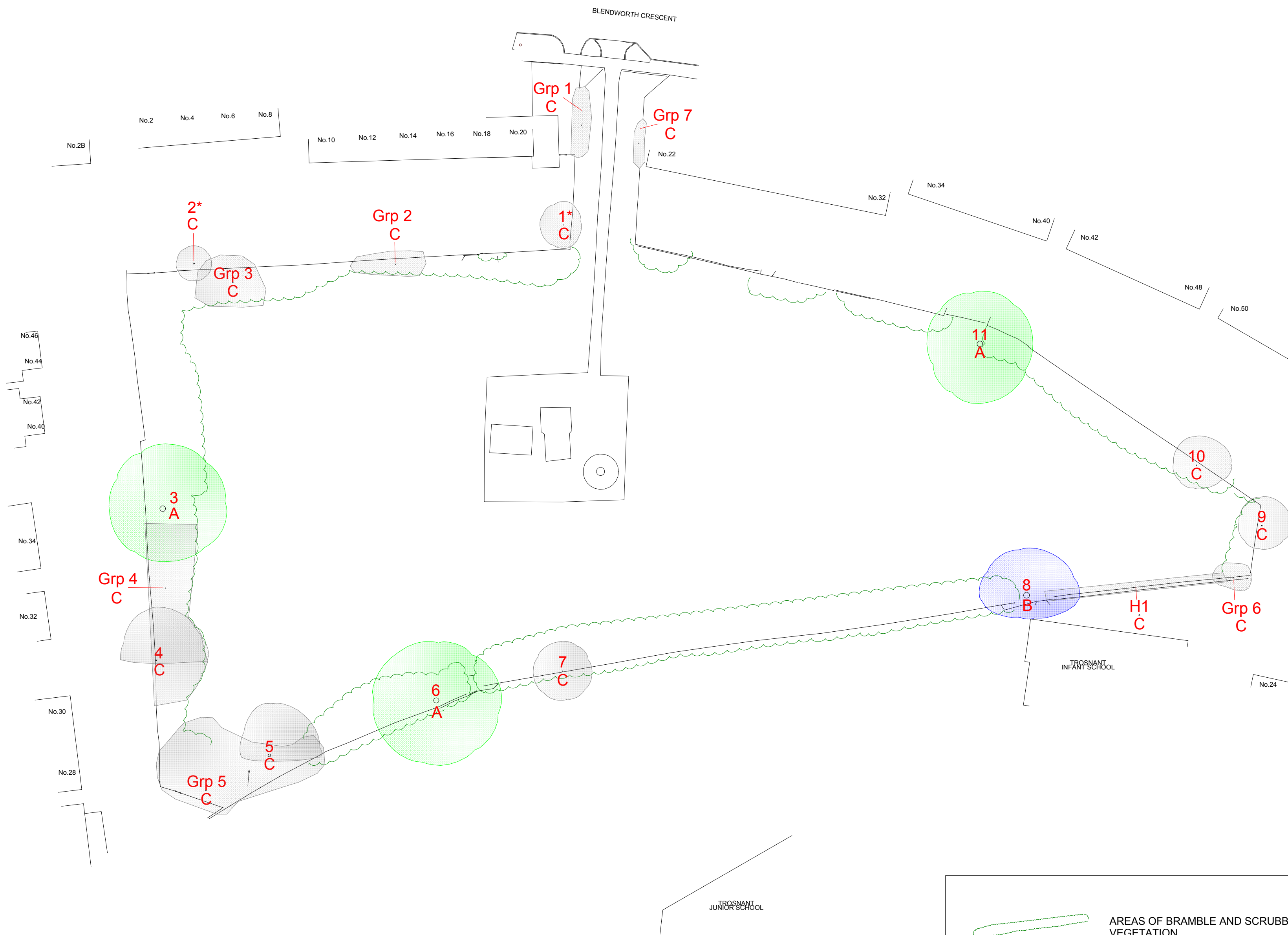
Tree No	Species	H't (m)	Single/ Multi-Stemmed (S or MS)	Stem Diam (mm)	Root Protection Area (m²)	Root Protection Distance (m)	Branch Spread (m)	H't of Crown AGL (m)	Life Stage	Physio-logical Condition	Structural Condition and General Observations	Preliminary Management Recommendations	Est. Rem. Contrib. (Yrs)	Cat
1*	Common Elder <i>Sambucas nigra</i>	4	MS x 10	90	37	3.4	N 4 E 3 S 4 W 4	N 1.5 E 1.5 S 1.5 W 2	Semi-mature	Good	Structural Condition - Fair Offsite tree Unable to verify health and safety due to no access Boundary line tree Bark wound Estimated data Multi-stemmed at ground level	Gain access and resurvey within 1 month	10+	C1 Interim
2*	Leyland Cypress <i>X Cupressocyparis leylandii</i>	5	S	200	18	2.4	N 3 E 3 S 3 W 3	N 1 E 1 S 1 W 1	Semi-mature	Good	Structural Condition - Good Offsite tree Unable to verify health and safety due to no access Developing tree Estimated data	Gain access and resurvey within 1 month	20+	C1 Interim
3	Pedunculate Oak <i>Quercus robur</i>	15	S	990	443	11.9	N 11 E 11 S 9 W 9	N 4 E 4 S 4 W 4	Mature	Good	Structural Condition - Good Epicormics on trunk Old pruning wounds Minor deadwood in crown	None required at time of survey	40+	A1
4	Common Ash <i>Fraxinus excelsior</i>	14	MS x 7	200	127	6.3	N 9 E 9 S 0.5 W 6	N 3 E 3 S 4 W 3	Early Mature	Good	Structural Condition - Fair Offsite tree Unable to verify health and safety due to no access Boundary line tree Crown shape distorted Minor deadwood in crown Old pruning wounds Multi-stemmed at ground level Southern side of tree previously heavily reduced Poor pruning wounds	Gain access and resurvey within 1 month	20+	C1 Interim

Tree No	Species	H't (m)	Single/ Multi-Stemmed (S or MS)	Stem Diam (mm)	Root Protection Area (m²)	Root Protection Distance (m)	Branch Spread (m)	H't of Crown AGL (m)	Life Stage	Physio-logical Condition	Structural Condition and General Observations	Preliminary Management Recommendations	Est. Rem. Contrib. (Yrs)	Cat
5	Crack Willow <i>Salix fragilis</i>	8	MS	300 350	96	5.5	N 9 E 9 S 1 W 5	N 1 E 1 S 4 W 1	Early Mature	Fair	Structural Condition - Fair Trunk and crown shape distorted Minor deadwood in crown Low hanging branches Boggy ground at base Bifurcated at ground level	None required at time of survey	20+	C1+2
6	Pedunculate Oak <i>Quercus robur</i>	17	S	900	366	10.8	N 10 E 11 S 11 W 11	N 2 E 3 S 4 W 2	Mature	Good	Structural Condition - Good Boundary line tree Ivy on trunk Major deadwood in crown Brambles at base Unable to gain acces to base of tree due to brambles Estimated data	Clear around base and resurvey within 1 month	40+	A1 Interim
7	Sycamore <i>Acer pseudoplatanus</i>	9	MS x 7	120	46	3.8	N 5 E 5 S 5 W 5	N 4 E 4 S 4 W 4	Semi-mature	Good	Structural Condition - Fair Boundary line tree Ivy on trunk Unable to verify health and safety due to no access Multi-stemmed at ground level Dense brambles at base	Clear around base and resurvey within 1 month	20+	C1 Interim
8	Pedunculate Oak <i>Quercus robur</i>	15	S	1020	471	12.2	N 8 E 9 S 4 W 8	N 4 E 4 S 4 W 4	Mature	Good	Structural Condition - Good Boundary line tree Epicormics on trunk Old pruning wounds Crown shape distorted Decaying old pruning wound on trunk to north side at 4m above ground level	None required at time of survey	20+	B1

Tree No	Species	H't (m)	Single/ Multi-Stemmed (S or MS)	Stem Diam (mm)	Root Protection Area (m²)	Root Protection Distance (m)	Branch Spread (m)	H't of Crown AGL (m)	Life Stage	Physio-logical Condition	Structural Condition and General Observations	Preliminary Management Recommendations	Est. Rem. Contrib. (Yrs)	Cat
9	Bay <i>Laurus nobilis</i>	4	MS x 6	150	61	4.4	N 5 E 5 S 4 W 4	N 1 E 1 S 1 W 1	Semi-mature	Good	Structural Condition - Fair Offsite tree Unable to verify health and safety due to no access Low hanging branches Multi-stemmed at ground level Estimated data	Gain access and resurvey within 1 month	20+	C1 Interim
10	Common Ash <i>Fraxinus excelsior</i>	7	MS x 7	130	54	4.1	N 5 E 6 S 4 W 4	N 4 E 2 S 2 W 4	Semi-mature	Good	Structural Condition - Fair Boundary line tree Old pruning wounds Multi-stemmed at ground level Previously crown lifted on north side	None required at time of survey	20+	C1
11	Pedunculate Oak <i>Quercus robur</i>	18	S	960	417	11.5	N 9 E 9 S 10 W 9	N 2 E 1.5 S 2 W 2	Mature	Good	Structural Condition - Good Ivy on trunk Minor deadwood in crown Low hanging branches Branch tear in crown to north side	None required at time of survey	40+	A1
Grp 1	Privet	3	MS x 6	30	2	0.9	N - E - S - W -	N - E - S - W -	Semi-mature	Fair	Structural Condition - Fair Low hanging branches Boundary edge group Off site group Multi-stemmed at ground level	None required at time of survey	20+	C2
Grp 2	Lawson Cypress	3	S	100	5	1.2	N - E - S - W -	N - E - S - W -	Young	Fair	Structural Condition - Fair Boundary line group Off site group Previously topped at 3m above ground level	None required at time of survey	10+	C2

Tree No	Species	H't (m)	Single/ Multi-Stemmed (S or MS)	Stem Diam (mm)	Root Protection Area (m²)	Root Protection Distance (m)	Branch Spread (m)	H't of Crown AGL (m)	Life Stage	Physio-logical Condition	Structural Condition and General Observations	Preliminary Management Recommendations	Est. Rem. Contrib. (Yrs)	Cat
Grp 3	Blackthorn	3	S	150	10	1.8	N - E - S - W -	N - E - S - W -	Semi-mature	Fair	Structural Condition - Fair Trunks and crown shapes distorted Poor quality group	None required at time of survey	20+	C2
Grp 4	Blackthorn	3	MS x 6	80	17	2.4	N - E - S - W -	N - E - S - W -	Semi-mature	Fair	Structural Condition - Fair Boundary edge group Multi-stemmed at ground level Poor quality group	None required at time of survey	20+	C2
Grp 5	Willow Poplar Elder Hawthorn Alder	8	S	200	18	2.4	N - E - S - W -	N - E - S - W -	Semi-mature	Fair	Structural Condition - Fair Crown shapes distorted due to group pressure Minor deadwood in crowns Low hanging branches Mixed species group Boggy ground around group Some trees previously failed	None required at time of survey	20+	C2
Grp 6	Common Hawthorn x 3	5	S	130	8	1.6	N - E - S - W -	N - E - S - W -	Semi-mature	Good	Structural Condition - Good Trunks and crown shapes distorted Boundary edge group	None required at time of survey	20+	C2
Grp 7	Lawson Cypress	3	S	100	5	1.2	N - E - S - W -	N - E - S - W -	Semi-mature	Fair	Structural Condition - Fair Boundary edge group Fully managed and maintained	None required at time of survey	20+	C2
H1	Common Hawthorn	2	S	200	18	2.4	N - E - S - W -	N - E - S - W -	Semi-mature	Fair	Structural Condition - Fair Boundary edge hedge Fully managed and maintained Ivy grows through hedge	None required at time of survey	20+	C2





NOTE:
Root Protection Areas and Shading Arcs not shown on this plan
Trees marked with * and groups and hedges are indicatively plotted

Crown Spread Root Protection Area Shading Arc

Category 'A' Category 'B' Category 'C' Category 'U'

0 40m

CBA TREES
Russell House
Unit 20 Chalcraft Business Park
Burnetts Lane, West End,
Southampton, SO30 2PA
02380 986229

10552
Land adjacent Blendworth Crescent, Havant, PO9 2BA
Tree Survey Plan

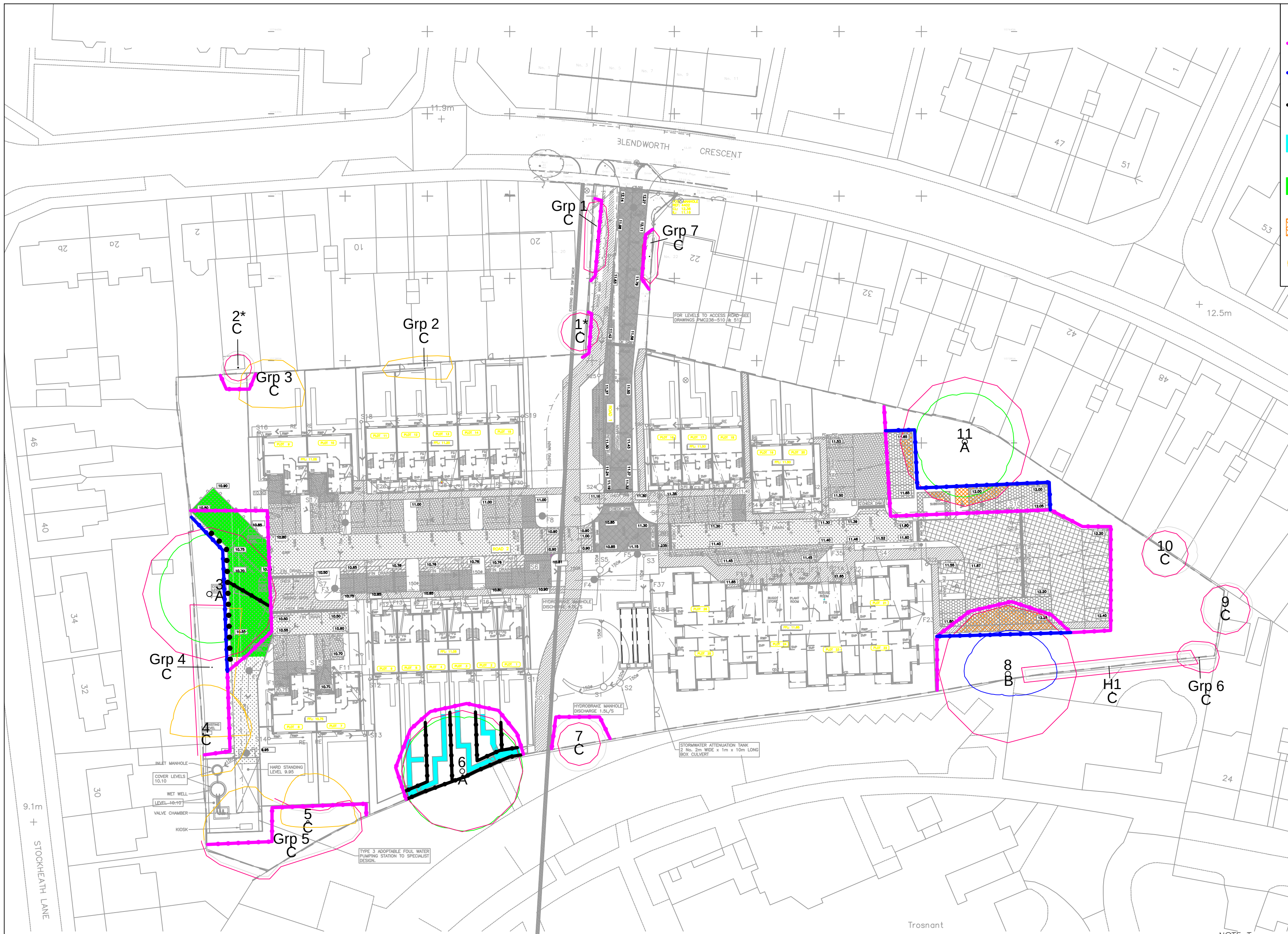
SCALE : 1 : 500 @ A2 DATE : 09/02/2016

MAP FILENAME : CBA10552.01 TSP

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KEY

- LOCATION OF TREE PROTECTION BARRIER FOR DURATION OF MAIN CONSTRUCTION WORKS
- LOCATION OF TREE PROTECTION BARRIER DURING SPECIALIST WORKS WITHIN RPA
- LOCATIONS OF FENCES, GATES + POSTS WITHIN RPAs TO BE INSTALLED AS DETAILED IN SECTION 13 OF THE ARBORICULTURAL REPORT
- LOCATION OF 'NO DIG' FOOTPATHS, 100mm BUILD UP AS DETAILED IN SECTION 12 OF THE ARBORICULTURAL REPORT
- LOCATION OF 'NO DIG' SURFACE APPROX 300mm BUILD UP OF LEVELS TO BE CONSTRUCTED AS DETAILED IN SECTION 12 OF THE ARBORICULTURAL REPORT
- LOCATION OF HAND EXCAVATIONS TO BE SUPERVISED BY ARBORICULTURAL CONSULTANT
- TREES, GROUPS + SECTIONS OF GROUPS TO BE REMOVED TO FACILITATE PROPOSED LAYOUT

KEY

- ROOT PROTECTION AREA (RPA)
- CROWN SPREAD
- TREE NUMBER
- CATEGORY

JOB TITLE
Land adjacent Blendworth Crescent, Havant

DRAWING TITLE
Tree Protection Plan

CBA DRAWING No.
CBA10552.02B TPP

BASE PLAN DRAWING No.
PMC238-501 D

SCALE 1:500@A2

DRAWN AM

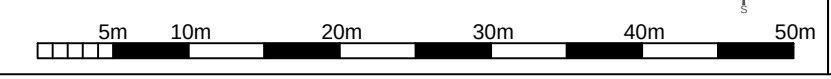
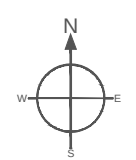
DATE April 2017

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Russell House, Unit 20 Chalcraft Business Park,
Burnetts Lane, West End, Southampton, SO30 2PA
Tel: 02380 986229

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NOTE: Trees marked with * and groups and hedges are indicatively plotted





	TREE WORKS SCHEDULE		
	Client:	PMC Construction & Development Services Ltd	Site: Land adjacent Blendworth Crescent, Havant, PO9 2BA
	Date:	April 2017	Consultant: James Fuller <i>FdSc.Arb, BTEC Nat.Dip.Arb, M.Arbor.A</i>

Tree No.	Species	Recommended Works
1	Common Elder	• N/A
2	Leyland Cypress	• N/A
3	Pedunculate Oak	• N/A
4	Common Ash	• Remove
5	Crack Willow	• Remove
6	Pedunculate Oak	• Crown lift to 4m above ground level on all sides by removing as small diameter branches as possible
7	Common Sycamore	• N/A
8	Pedunculate Oak	• N/A
9	Bay	• N/A
10	Common Ash	• N/A
11	Pedunculate Oak	• Crown lift to 3m above ground level on south and west sides by removing as small diameter branches as possible
Grp 1	Privet	• Reduce to provide clearance for new footpath
Grp 2	Lawson Cypress	• Remove
Grp 3	Blackthorn	• Remove
Grp 4	Blackthorn	• Remove section highlighted on the Tree Protection Plan CBA10552.02B TPP
Grp 5	Mixed Species	• Reduce back to edge of gardens • Remove section highlighted on the Tree Protection Plan CBA10552.02B TPP
Grp 6	Hawthorn x 3	• N/A
Grp 7	Lawson Cypress	• N/A
H1	Hawthorn	• N/A

- All tree works are advised to be carried out between July and September or November and February. Tree works should also avoid the season for nesting birds.
- All tree works should be carried out in accordance with current best practice guidelines and BS3998 – Tree Works. Only natural target pruning method to be used.
- We recommend the use of an Arboricultural Association Approved Contractor or an ISA Certified Arborist/Tree Worker suitably insured and experienced to carry out the tree works.





TREES AT _____ :

SUMMARY OF

TREE PROTECTION MEASURES

Introduction

This leaflet shall be issued to all site personnel as part of their induction briefing.

It describes in summary form the precautions that site personnel shall at all times follow, to ensure that the existing trees on the site come to no harm.

The precautions described are neither arbitrary nor reducible and must be adhered to in full.

These precautions are necessary because unprotected trees are very vulnerable to damage during demolition and construction works.

Furthermore, many of the trees on the site are under **LEGAL PROTECTION** and damaging them can result in heavy fines.

Two common misconceptions about trees:

MYTH: Trees have deep taproots and so shallow excavations will not harm the tree.

FACT: 90% of all tree's roots are found in the top 600mm of soil; all excavations near to trees are likely to cause root damage which can kill the tree.

MYTH: Trees will quickly heal over any bark wound, with no ill effect.

FACT: Bark wounds take years to heal and larger ones never do; missing bark can lead to disease and even the death of the tree.

Tree Protection

All trees adjacent to unsupervised work areas have been protected by tree protection barriers.

These barriers must be respected at all times and no attempts shall be made to damage, bypass or ignore them.

In areas designated for supervised working, no works shall be undertaken without the supervisor being present or without him/her issuing a "carry on" chit.

Prohibitions Adjacent to Trees

Inside the exclusion area of the tree protection, the following prohibitions shall apply.

- **No** digging or scraping
- **No** storage of plant or materials
- **No** vehicular access
- **No** fire lighting
- **No** handling, discharge or spillage of any chemical substance
- **No** water-logging

In addition to the above, further precautions shall be taken near to trees.

- A 10m separation distance shall be observed between trees and any substance injurious to their health, including fuels, oil, bitumen, cement (including washings) builders' sand, concrete mixing and other chemicals.
- No fire shall be lit such that flames come within 5m of any foliage; this shall be taken to mean a fire separation distance to the leaved of 20m.

Avoiding Damage to Stem and Branches

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 trees.

Consequently, any transit or traverse of plant in proximity to trees shall be conducted under the supervision of a spotter to ensure that adequate clearance is at all times maintained.

In some circumstances, it may be impossible to achieve this, necessitating the pruning of the tree.

If this is necessary, a specialist team shall be called in following referral to the project Arboriculturist.

No tree pruning shall be undertaken by demolition or construction personnel.

Asking for Help

If you see any damage to a tree or its protective fencing, or if you need a tree pruning for plant clearance, contact **CBA Trees** as follows:

Office Telephone: 020 8098 6229

REMEMBER:

**ALL TREE DAMAGE IS
AVOIDABLE –**

SO AVOID IT!



**PROTECTIVE BARRIERS.
THESE BARRIERS MUST BE
MAINTAINED IN ACCORDANCE
WITH THE APPROVED PLANS
AND DRAWINGS FOR THIS
DEVELOPMENT.**

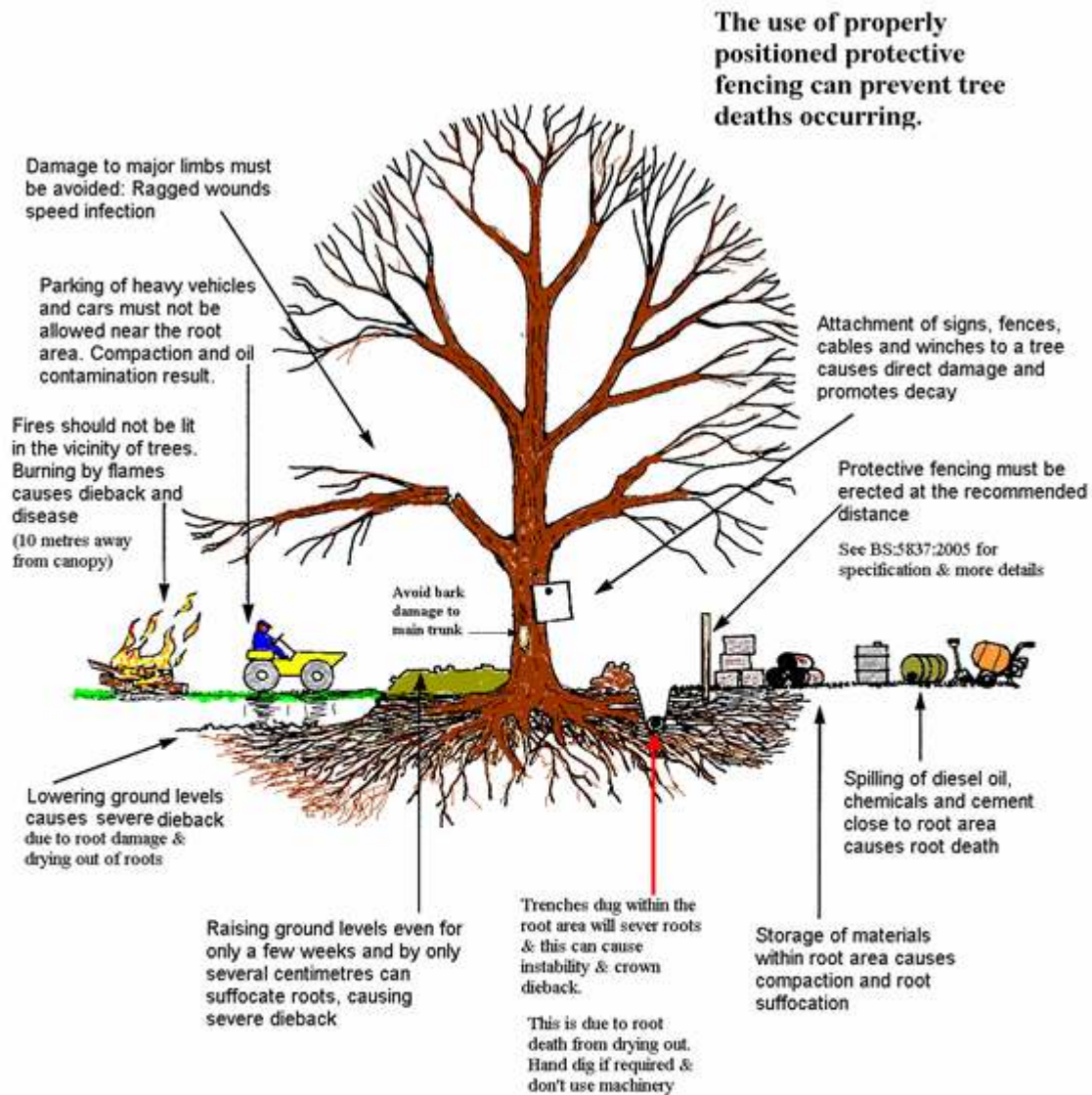


**TREE PROTECTION AREA
KEEP OUT !**

**(TOWN & COUNTRY PLANNING ACT 1990)
TREES ENCLOSED BY THIS FENCE ARE PROTECTED BY
PLANNING CONDITIONS AND/OR ARE THE SUBJECTS OF A
TREE PRESERVATION ORDER.
CONTRAVENTION OF A TREE PRESERVATION ORDER MAY
LEAD TO CRIMINAL PROSECUTION**

**ANY INCURSION INTO THE PROTECTED AREA MUST BE
WITH THE WRITTEN PERMISSION OF THE LOCAL
PLANNING AUTHORITY**

Common causes of Tree Death



Please use copies of this as an on-site poster for personnel

(Source: Arboricultural Information Exchange website, 2005)







The Professional Arboricultural Consultancy

Qualifications of James Fuller Senior Consultant

James Fuller FdSc.Arb, BTEC Nat.Dip Arb, TechArbor.A joined CBA Trees in 2007 as a gap-year junior surveyor/arborist having attained the Foundation Degree in Arboriculture at Sparsholt College near Winchester and has more recently acquired the Professional Tree Inspector's Certificate.

Over the years James has gained experience in every field of our work, undertaking all elements of consultancy including large BS5837:2012 tree surveys using the latest data capture equipment to produce Implication Assessments and Method statements for planning applications.

Having broadened his knowledge and gained considerable experience, James is now a retained Senior Consultant, undertaking site assessments, site monitoring, and provision of advice to prominent development companies for large and complex projects.