



Arboricultural Implications Assessment and Arboricultural Method Statement Fairfield Road, Havant for Bloor Homes Southern.

February 2011
JBA 11/ 04. AR01 REVC (29.06.12)



1.0 Summary

- 1.1 The following points are explained and qualified in more detail in this report and this summary is intended for quick reference only. Any actions consequent to this summary should be discussed with the Head of Arboriculture at JBA before being undertaken in order to prevent potential breach of tree protection legislation, whether by planning condition, area planning designation or specific tree preservation order (which may apply to individual trees, groups, hedges of any size).
- 1.2 Overview of Tree Constraints: Following a site inspection in February 2011 our general preliminary assessment of the site as a whole is that the existing vegetation presents a moderate/ high risk to the developer - in terms of potential delay to the development process and a moderate risk to the developer in terms of the cost of arboricultural surgery works.
- 1.3 Overview of Construction Costs: In terms of the cost of the protecting of root protection areas and special construction methodology - from our preliminary assessment the site was deemed to be Moderate risk to the developer in terms of the cost of the protecting of root protection areas and moderate risk to the developer in terms of the costs of special construction methodology.
- 1.4 Notable Tree Constraints: The main trees, tree groups or hedges of arboricultural significance (A and B grade in terms of tree health and general visual amenity contribution) are as follows:
- 1 category A tree.
 - 21 category B trees.
 - 2 category B groups.
- 1.5 Designations: Having made an initial desk top search, I have determined that the following designations apply to this site: 1. TPO's: Unknown. 2. Conservation Area: unknown. Other: unknown. This is not an exhaustive search and has been given without confirmation by the Local Planning Authority (LPA) that any designations apply. Tree protection can be applied at any time and the situation is dynamic. In this respect, this initial opinion shall not be used to inform actions that might later constitute a breach of protection legislation or planning conditions. All intended actions should be discussed with the Principal and Head of Arboriculture.

1.6 Mitigation Measures: The following mitigation measures will be included in this report:

- Protective fencing: will be required for all retained trees, although may require moving within RPA's to allow for construction activities.
- Planting: Is proposed within the layout proposal and will replace losses and improve the aesthetic values of the site.
- Ground protection: is required to protect RPA's where protective fencing has been moved to accommodate construction activities.
- No-dig surfaces: will be used where construction is required within RPA's, to minimize potential damage to trees.
- Hand-dig methods: Will be implemented to accommodate the proposed pumping station within the RPA of T35 to avoid damage associated with mechanical excavation.

1.7 Seasonal Factors:

All trees and groups will require nesting bird surveys if work is commenced adjacent to them between the months of March and September.

2.0 Introduction

2.1 Instructions have been received to assess trees and other significant vegetation at Fair field Road, Havant in relation to proposed development. As such our assessment is to be carried out in accordance with the principles of BS 5837:2005 'Trees in Relation to Construction: Recommendations.'

2.2 The site was visited on 17/ 02/ 2011 in sunny weather conditions. Trees detailed in the tree survey schedule at Appendix 4 have been visually inspected from ground level only with no aerial inspection or any decay detection equipment used and is relevant to the time and date of the survey only. It is proposed to develop the land at Fair Field Road by accommodating a residential development.

2.3 As there is vegetation located on and adjacent to this site, which could contribute to the character and appearance of the area, it is necessary to ascertain the quality and value of that vegetation and the likely impact that the proposed development will have on it. In addition it is necessary to consider the impact retained trees could have on the development in the future.

- 2.4 Trees differ in their tolerance of root loss or disturbance, according to their age, species and/or condition. In addition root growth, while typically concentrated in the top metre of soil, can be affected by existing site features, including natural and manmade topography and structures that can restrict tree root growth in any direction. Consideration is given to all relevant factors when ascertaining the viability of tree retention.

3.0 Site Description

- 3.1 The proposal site is located in the residential area of Havant. The proposed site consists of a wooded area utilised by Fairfield Infant School and part of a school playing field previously owned by Warblington School. It is located to the West of The local train station, the railway of which borders the site to the North. Residential housing surrounds the site to most aspects and the nearest main road is the A27 to the South of the site. Access to both areas of the site is gained through the respective schools. Access to the wooded area is gained via a foot path off Fairfield Road and the playing field is accessed through Warblington School, off Southleigh Road.

- 3.2 Trees significant to the proposed development are located on the Southern boundary, in the North East Corner and to the West of the site.

4.0 Tree Discussion

- 4.1 A total of 86 individual trees and 15 groups of trees have been assessed in detail from ground level, by visual means only. The Tree Survey Schedule, at Appendix 4, details the trees in respect of dimension and quality in accordance with the methodology set out in the British Standard 5837:2005 'Trees in Relation to Construction - Recommendations'. Additional comments may also be presented where appropriate.
- 4.2 The site contains a large number of Field Maple, Hawthorn and Sycamore as well as some Silver Birch, Cherry and Ash. The West aspect of the site contains a wooded area, which although highly treed, is limited in species and age. Most trees in this area have therefore been categorised as category C and are not considered to be particularly significant. G9 however has been categorised as category B due to its significant screening value. Some other significant specimens were identified, including one particularly high quality Holm Oak

which is offsite. The Southern boundary contains many poor quality specimens, some of which should be removed for arboricultural reasons. A large Ash tree (T86) has also been identified which is a particularly good specimen and should be retained, where possible.

4.3 Removals/ Tree Work

Some trees have been identified as category “R” and as such should be removed for the purpose of sound arboricultural management, regardless of proposed development.

4.4 A large amount of trees are required to be removed to incorporate the proposed layout and allow for the construction of highways, houses and open space. However, the majority of these removals are category “C” and in accordance with the guidelines set out in BS5837 should not pose a constraint to construction. Some category “B” trees are also required to be removed to accommodate the layout although this will not be of detriment to the long-term values of the site.

4.5 The Southern boundary screen, consisting mainly of Hawthorn, Elder and Bramble is in poor general condition and contains some specimens which are category R and should be removed. This group is situated on a bank and as such would provide an effective screen to the development from existing residential properties. As such all Category R trees will be removed as well as some Category C trees, considered overbearing to proposed gardens. The remainder of this group will be retained to act as a screen to the existing residents to the South.

4.6 Any remedial works required to provide clearance for proposed footpaths, drives, cycle lanes and to aid construction should be performed by fully qualified, insured and capable arborists, working in accordance with the principles outlined in BS 3998 and current industry best practice. All works must be completed prior to construction work to prevent accidental damage and aid healthy retention.

4.7 Tree Protective Fencing/ Ground Protection

All trees and tree groups to be retained will require protective fencing, in order to prevent foreseeable damage during the construction process. Where necessary, this will be moved within the RPA to allow for construction activities and ground protection will be implemented for pedestrian access. Where tree protective fencing is to be moved, pruning may be required to accommodate it and will also

be carried out to the standards required for remedial tree work (as above). Details of protective fencing, ground protection and appropriate standards of tree work are included in the method statement.

4.8 No-dig methods

Where proposed areas of hard standing are located within the RPA and deemed acceptable, a no-dig method of construction will be implemented to prevent foreseeable damage to tree roots. This is relevant to G13, T30, T85 and T86. Details of no-dig methods of construction are included in the method statement.

4.9 Services

All services are located outside of RPAs. An existing Gas Main is present within the RPA of T30 and T35 and requires re-directing. Where it is within the RPA of these trees, the existing pipe will be retained in situ; to prevent the necessity of mitigation actions.

4.10 Hand-dig methods

Where the proposed pumping station is located within the RPA of T35, a hand-dig method will be implemented to prevent damage associated with mechanical excavation and allow the healthy retention of this tree. Details of this method are included in the method statement.

5.0 Conclusions and Recommendations

- 5.1 The proposed site is located in the residential area of Havant, including a school field currently utilised by Warblington School and a wooded area formerly owned by Fairfield infant school. Access to the wooded area is gained via a foot path off Fairfield Road and the playing field is accessed through Warblington School, off Southleigh Road. The trees most relevant to the proposed development are located to the West of the site, on the Southern boundary and in the North East corner of the site.
- 5.2 The majority of vegetation surveyed has been categorised as category C and as such should not pose a constraint to construction. A large number of trees are to be removed to incorporate the development, although the majority are also category C and are of no particular significance. Category R trees are to be removed regardless of layout proposals, for arboricultural reasons. Some removals of category B trees are required, although their loss will be mitigated by the planting of other specimens within the landscape proposals. G9 is the group of greatest importance requiring partial removal to accommodate the layout. In order to retain the value this group provides, it will be retained where closest to the roadside to maintain the benefit it provides to the surrounding area.
- 5.3 Some tree protection/ specialist construction methods are required although these are limited in nature and will not be of detriment to the long term values of the existing tree stock. Remedial works required and recommended for retained trees will not have any material affect or impact on the sustainable public amenity values or to the site's contribution to the landscape.

Method Statement

1.0 SUMMARY

- 1.1 The purpose of this report is to aid the preservation of trees shown to be retained at and adjacent to the site shown on the attached plan TPP JBA 11/04 TS01/2 REVD. Trees can easily be retained and effectively protected during the proposed redevelopment of the site, by clearly setting out the tree protection methods, construction techniques and working practices. This document provides this information; principles that are approved and enforced by the local planning authority.
- 1.2 The following points are explained and qualified in more detail in this report and this summary is intended for quick reference only. Any actions consequent to this summary should be discussed with the Head of Arboriculture at JBA before being undertaken in order to prevent potential breach of tree protection legislation, whether by planning condition, area planning designation or specific tree preservation order (which may apply to individual trees, groups, hedges of any size).
- 1.3 This document will give site specific instructions on the methods required to protect the existing tree stock agreed to be retained. These methods are set out in a logical sequence of operations and include:
- Pre-construction meeting: (where required) To run through the arboricultural method statement (AMS) and ensure all relevant parties are familiar with its contents and show the trees concerned and where protection will be required.
 - Execute Tree works to BS3998:2010 'Tree Work': These works are contained in the tree schedule and may comprise crown raising, crown reduction, crown thinning, dead wood removal, removal of crossover branches, weak fork treatment, pollarding etc. See Schedule for a tree by tree list of works. If these need to be scheduled as formal schedule of works, please contact the head of Arboriculture at JBA.
 - Tree protection fencing and exclusion signage: To BS5837:2005 or other agreed approach.
 - Ground protection: Techniques to avoid compaction for access routes.

- Ground works, foundations and services: Methods to allow building operations including service routing and special measures where root protection areas (RPA's) are unavoidably breached. To include specialist construction methods - no-dig solutions for footpaths and paved areas, where allowable, in proximity to trees without damage to the tree, from root damage, or to the buildings, either from roots or from ground desiccation and heave.
- Erection of scaffolding for construction
- General tree care measures and awareness
- Site monitoring

1.4 The BS recommendations are made for appropriate barriers to exclude construction from RPA's: The RPA for each tree or hedge is provided in the tree survey schedule. The protective barriers are sacrosanct and no construction activities shall take place within this zone. This fencing should be erected in position prior to any demolition or construction and be maintained in position for the duration of the development process. Where it has been agreed that pedestrian access for construction operations can be located within the RPA a combination of barriers and ground protection should be adopted. Where the construction of permanent hard surface is considered acceptable within the RPA, a non-dig design solution should be used to avoid root loss caused by excavation - all details for these measures are set out in this document.

1.5 The Tree Protection Plan (TPP) will indicate retained trees, trees to be removed, the precise location of protective barriers and ground protection, service routing and specifications, areas designated for structural landscaping to be protected and other construction related facilities. This document and the associated TPP will be endorsed by planning conditions, agreement or obligation as appropriate.

2.0 Important Tree Information

2.1 As the majority of tree roots are found in the upper metre of soil, development works, including for example even shallow excavation, soil compaction and soil contamination, can be harmful to trees in close proximity. Trees differ in their tolerance of root loss or disturbance, according to their age, species and/ or condition. All protection works within this document will be in accordance with BS 5837:2005 'Trees in Relation to Construction – Recommendations'.

2.2 An assessment of the site's tree stock has been undertaken and those trees to be retained are clearly shown on the Tree Protection Plan (TPP). A calculation has been made of the volume of soil required to ensure the survival of these and this is represented by the Root Protection Area (RPA) indicated by the magenta circles or polygons around the retained tree on the plan.

2.3 The RPA has been used to inform the Construction Exclusion Zone (CEZ), the area to be protected during development by the use of barriers, ground protection and specialised construction techniques - outlined below:

3.0 Methodology

3.1 References may include: British Standard 5837:2005 'Trees in Relation to Construction - Recommendations'; British Standard 3998:2010 'Tree Work' and National Joint Utilities Group 'Guidelines for the planning, installation and maintenance of utility services in proximity to trees' 1995.

3.2 Sequenced Methods of Construction and Tree Protection

3.2.1 Phase 1

P1.0 Pre Contract Meeting

P1.1 An onsite meeting will be held, if necessary, with all relevant parties including the developer, appointed arboricultural supervisor and Local Planning Authority (LPA) representative. The purpose of this meeting is to record site features including tree condition, agree tree works (detailed below), location of permanent and temporary access, location of site storage and the location of tree protection barriers.

3.2.2 Phase 2

P2.0 Execute Agreed Tree Works

Proposed Tree Works

Tree No	English Name	Proposed Works	Comments
T1-T9	Mixed species	Remove	Remove to accommodate site Layout
T12 – T34	Mixed species	Remove	Remove to accommodate site Layout
T35	Hawthorn	Remove dead wood, remove ivy	Remedial works for veteran tree
T36 – T38	Mixed species	Remove	Remove to accommodate site Layout

Tree No	English Name	Proposed Works	Comments
T40 – T45	Mixed species	Remove	Remove to accommodate site Layout
T52	Sycamore	Remove	Remove to accommodate site Layout
T56	Hawthorn	Remove	Remove to accommodate site Layout
T59 – T66	Mixed species	Remove	Remove to accommodate site Layout
T70	Hawthorn	Remove	Remove to accommodate site Layout
T78	Elder	Remove	Remove to accommodate site Layout
T80	Elder	Remove	Remove to accommodate site Layout
T82 – T83	Elder	Remove	Remove to accommodate site Layout
G1 – G8	Mixed species	Remove	Remove to accommodate site Layout
G9	Mixed species	Remove	Remove to accommodate site Layout
G10	Mixed species	Remove	Remove to accommodate site Layout
G12	Mixed species	Remove	Remove to accommodate site Layout
G13	Mixed species	Partial removal	Partially remove to accommodate sit layout, retain in POS where appropriate to maintain boundary definition.
G14	Mixed species	Remove	Remove to accommodate site Layout
G15	Mixed species	Partial removal	Partially remove to accommodate sit layout, retain in POS where appropriate to maintain boundary definition. Remove fallen and damaged specimens.

P2.1 Tree works have been specified for remedial reasons and to accommodate the proposals. All tree work is to conform to BS 3998:2010 'Tree Work' (with amendments) and to current arboricultural best practice. Tree works are to be undertaken by a professional and specialist arboricultural contractor, who carries the appropriate experience and insurance cover and following formal approval from the LPA.

3.2.3 Phase 3

P3.0 Tree Protection Barriers

- P3.1 In order to exclude the CEZ from significant demolition and construction activity, protection barriers will be erected for all retained trees.
- P3.2 Protection barriers will comprise a scaffold framework in accordance with Figure 2 of BS 5837:2005 (The BS). The framework will consist of vertical and horizontal scaffolds with vertical tubes spaced at no more than 3m intervals and driven into the ground. Weld mesh (Heras or similar) panels will be securely fixed on to this framework with wire or scaffold clamps. Tubes will be firmed into holes in the ground made with post hole boring equipment. Post holes are to be no more than 30% larger than the scaffold tube. Supporting struts will be fixed to the inside of the barrier to ensure maximum rigidity (See Appendix1).
- P3.3 Once the barriers have been properly erected in position, they are to be considered as sacrosanct and are not to be removed or altered in any way without prior approval from the LPA.
- P3.4 Clear notices are to be fixed to the outside of the fencing with words such as 'PROTECTED AREA – NO ACCESS AND NO STORAGE OR WORKING WITHIN THIS AREA'.
- P3.5 All operatives and other relevant personnel are to be informed of the role of the exclusion barriers and their importance. A copy of the Tree Protection Plan will be displayed on site at all times during construction.
- P3.6 It may be necessary to remove existing shrubs and other vegetation from under the canopy of trees or remove lower branches prior to erecting the fencing. Any works of this nature are to be carried out by hand.
- P3.7 Where it has been agreed that pedestrian access for construction operations can be located within a tree's RPA a combination of barriers and ground protection should be adopted to form the CEZ. For temporary pedestrian access the installation of a single thickness of scaffold boards over a compressible layer laid on to a geotextile membrane/ geoweb filled with washed shingle (20mm gauge) or supported by scaffold will be sufficient.

- P3.8 The location of the protection barriers is indicated on the TPP. The position of the barriers is to be marked out with biodegradable marker paint on site and agreed with appropriate representatives from the LPA and Contractor. The barriers will be erected prior to any works on site in the vicinity of retained trees, including demolition or the delivery of machinery, materials, plant or equipment to the site or any adjacent land. The barriers will remain in situ until final completion or a time agreed by the LPA and Contractor.

3.2.4 Phase 4

P4.0 Construction of Hard Standing, Drives and Parking Bays

- P4.1 The sections below relate to the construction of hard surfaces, for example, roads and paths, parking areas and bases for bicycle or bin stores not required to be to an adoptable standard and within the CEZ of retained trees. This is relevant to G13, T30, T85 and T86.
- P4.2 With reference to BS 5837 clause 11.8, where the construction of permanent hard surface is approved within the CEZ, a non-dig design should be used to avoid root loss caused by excavation.
- P4.3 The construction area is to be levelled by filling hollows and removing protrusions and hard landscaping. No soil excavation, other than the removal of a 'turf or vegetation layer' is to be carried out during this process and filling material should be of a porous nature to allow water and oxygen to reach the soil below. In the unlikely event that roots are required to be pruned, sharp cutting tools are to be used to ensure that minimum damage is caused. No roots, greater than a diameter of 25mm, are to be pruned without prior agreement with the appointed arboricultural supervisor or LPA representative.
- P4.4 A geo-textile membrane (Terram or similar) is then to be laid over the whole surface, including any retained hard surfaces. This is to be fixed firmly into position with ground pegs.

- P4.5 Where edging blocks or stone are to be used to retain the drive surface within the CEZ, the mix into which they are set will be laid directly onto the geo-textile membrane over the supporting base. No deeper excavations are to be made to accommodate the footing of the edging detail.
- P4.6 A geoweb material is then placed over the membrane and also fixed into position. An example material is attached at Appendix 2. An aggregate sub-base material is then introduced in to the geoweb. The depth of the sub-base aggregate should be the same depth as the geoweb and no less than 100mm. The aggregate should be a granular no fines material (typically 40-20mm). Not only will this material dissipate load and reduce soil compaction, it will permit easy passage of air (oxygen) to the rooting area of the tree below the surface.
- P4.7 The sub-base material is to be compressed into position ready for the final surface treatment. This surface can also be used as a temporary works access route prior to the laying of the final surface.
- P4.8 Final surface details for residential purposes will be of a porous nature such as gravel, block paviors or small paving slabs and should be approved by the LPA. In the usual way these should be bedded into a lean mix that is also highly porous. Final surface treatment can be installed as part of the landscaping works.

3.2.5 Phase 5

P5.0 Ground works, Foundations, Drainage and Services

- P5.1 Spoil, including soil and rubble will be removed from site and not stored against any protection barriers or over any ground protection. Only predetermined access routes with appropriate ground protection will be used during this process.
- P5.2 Specialist foundation design will not be required providing foundations are located outside the RPA of retained trees.
- P5.3 All service routes are located outside RPAs of retained trees and therefore no mitigation actions are required.

- P5.4 For the accommodation of the proposed Pumping station within the RPA of T35 a hand dug trench will be dug to the extent of the required excavation. This will be marked on site and agreed with all parties prior to commencement. The trench will then be dug to a depth of 600mm, will all roots severed by hand.

3.2.6 Phase 6

P6.0 Erection of Scaffolding

- P6.1 Pruning may be required to allow erection of scaffolding to enable reasonable construction of the buildings.

3.2.7 Phase 7

P7.0 Dismantling Protection Barriers and Landscaping Works

- P7.1 A minimum of seven days notice will be given to the LPA prior to the dismantling of the protection barriers.
- P7.2 All landscaping once the barriers have been removed will avoid soil re-grading, rotovation and disturbance within the CEZ and no soil levels be altered after the protection barriers have been removed. Any hard landscaping within tree protection distances will conform to the principles set out in Phase 4.
- P7.3 Where fencing is required within the CEZ post holes must be dug by hand and be no more than 10% larger than the post. All spoil is to be distributed evenly around surrounding area to avoid a change in soil levels. Consideration must be given to planning of works with regards to starting and end points and how this may be affected by tree locations, fencing should also be deviated as appropriate to avoid conflict with trees.

4.0 General Principles for Tree Protection

- 4.1 A copy of this AMS and the associated TPP is to be retained on site at all times and all personnel associated with the construction process will be made familiar with the principles within.
- 4.2 If 360-degree excavators are to be used during construction, at no time is the excavating arm to encroach over the position of the protection barriers.
- 4.3 No fires are to be lit on site at any stage during the construction process.

4.4 A designated storage area is to be created away from retained trees. All materials for construction purposes are to be stored in this compound. Care must be taken to avoid the leakage or leaching of noxious materials into the soil. Limited space for dry materials can be provided on site on the existing parking area but addition off site space is expected to be required.

4.5 No materials will be stored or left stacked in positions around the site other than within the storage compound area.

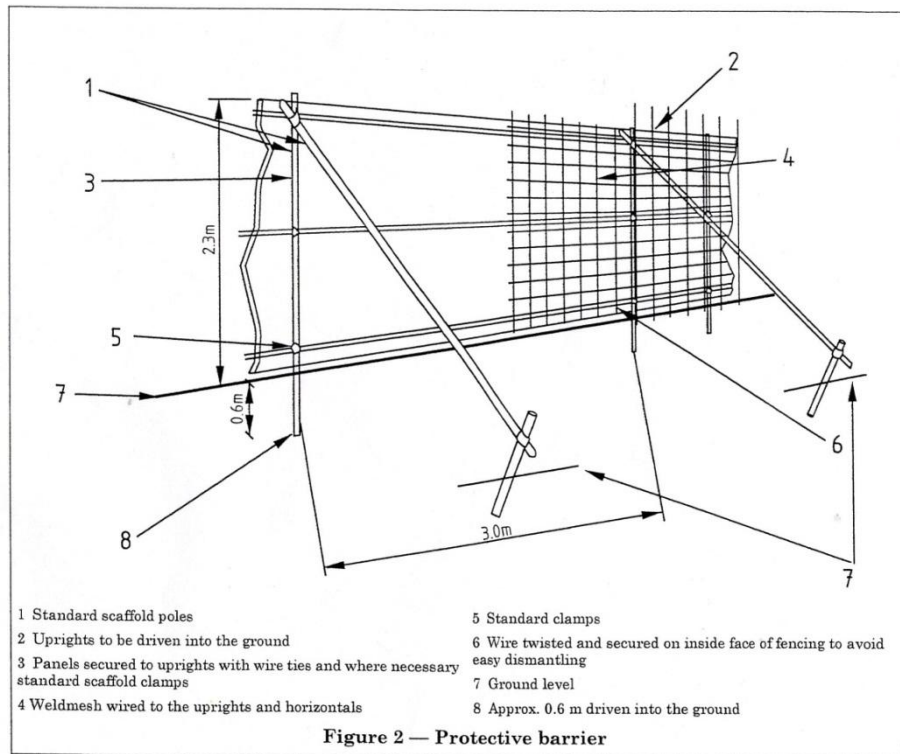
5.0 Communication Details, Monitoring and Compliance

5.1 In order to ensure that the principles of tree protection set out in the statement are adhered to, it is important to set out communication details for key individuals and tasks that require monitoring. These details should be retained by all relevant parties and available on site at all times. Relevant parties will be advised of any changes in personnel or contractor during the development process.

5.2 Before construction begins written confirmation that the developer/ contractor or its agents agree to comply in full with the principles set out within this Method Statement will be lodged with the LPA.

Scott Reid
Arboricultural Consultant
For and on behalf of James Blake Associates

Appendix 1: Tree Protection Fencing and Ground protection

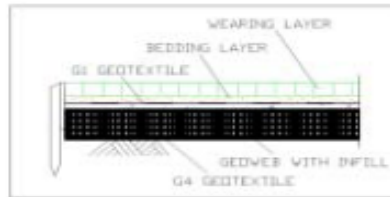


Appendix 2: Example of Ground Protection

THE SOLUTION

Where access driveways or vehicle hard standing areas are planned in areas adjacent to trees, Arboricultural Officers will normally specify a 'no dig' construction to eliminate the damage associated with normal construction methods. With this method no removal of surface soils is allowed. Instead, a permeable structural sub-base is laid directly onto the existing ground level with a permeable wearing course, such as grass reinforcement, low tack resin coated gravels or block paving, laid on top.

'No dig' construction may be accommodated with the use of perforated Geoweb in the sub-base layer. Geoweb reduces the overall depth of construction by introducing a cellular structure which dissipates downward loads by a horizontal transfer through the cell structure. This process in conjunction with the perforated cell wall also imports structural integrity to free draining aggregates which



would otherwise be unacceptable in road construction. Therefore, a robust, shallow and free-draining sub-base is achieved, which allows vehicular access whilst allowing water and oxygen to permeate down to the tree roots.



Expanding and staking Geoweb panels



Infilling the Geoweb

In accordance with British Standard BS5837: 1991 - Guide for Trees in Relation to Construction and APN 1:1996 - Driveways Close to Trees, Geoweb acts to protect tree roots in three main ways;

1. Used with the correct infill, Geoweb allows the construction of a permeable sub-base.
2. Geoweb enables 'no dig' construction to be used, avoiding any severance of tree roots.
3. Geoweb prevents the compaction of soil surrounding roots.

The permeable wearing course to complete the system can be accommodated through Ecoblock, a grass protection or gravel retention system. The cellular construction of Ecoblock provides a fully permeable, attractive wearing course which is capable of accommodating heavy vehicle loads, whilst allowing the exchange of oxygen and free drainage of water to the sub-base.

The Geoweb system has been used in tree root protection applications with great success for the following clients:

- **Node House - North Dorset District Council**
A number of mature beech trees have been protected during the construction of a large residential property. This site has been closely monitored for the past 30 months by local tree officers. There have been no noticeable problems.
- **Woodfield School - Wigan Metropolitan Borough Council**
Geoweb was used to protect the roots of trees lining an access road and in an extended car parking area.

We can provide comprehensive technical support for our range of ground engineering products. If you have a particular application which you would like to discuss in more detail, please contact our Specification Sales Team on 01204 862222, who will be pleased to arrange for one of our representatives to contact you.

KEY BENEFITS OF THE GEOWEB SYSTEM:

- **'No-dig' solution**
- **Cost effective**
- **Fast and simple to install**
- **Design flexibility**
- **Environmentally-friendly**
- **Tried and tested product**

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July 2004
A member of the Heiton Group

Appendix 3 Tree Survey Schedule

			Canopy Spread															
Tree Ref. No.	Species (Common Name)	Height (m)	N	E	S	W	Grnd Clrnc	DBH (mm)	RPR (cm)	RPA (m)	Age class	Gen Cond	Structural Defects/Comments	Estimated remaining contribution (BS 5837)	BS Cat	BS Sub Cat	Prelim Tree Work Recommendations	
G1	Hawthorn Apple	4	As On Plan				0	160	192	11.58	MA	F	Ivy in group. Specimens in group are of little quality. Apple within group is growing within chain-link fence.	10-20	C	1		
T1	Sycamore	7	3	3	4	3	2	260	312	30.57	MA	F	Typical Form and Condition	10-20	C	1		
T2	Oak	10	1	2	5	4	1	290	348	38.03	MA	F	Uneven crown due to competition	10-20	C	1		
T3	Ash	11	2	4	4	2	2	230	276	23.92	MA	F	Uneven crown due to competition Bifurcates at 850cm	10-20	C	1,2		
T4	Alder	12	3	3	3	3	5	210	252	19.94	MA	F	Uneven crown due to competition	10-20	C	1,2		
T5	Field Maple	12	4	5	1	1	0	230	276	23.92	MA	F	Uneven crown due to competition Multi stem tree with weak union approx 2m	10-20	C	1,2		

			Canopy Spread															
Tree Ref. No.	Species (Common Name)	Height (m)	N	E	S	W	Grnd Clrnc	DBH (mm)	RPR (cm)	RPA (m)	Age class	Gen Cond	Structural Defects/Comments	Estimated remaining contribution (BS 5837)	BS Cat	BS Sub Cat	Prelim Tree Work Recommendations	
T6	Field Maple	13	3	4	1	3	2	310	372	43.45	MA	F	Uneven crown due to competition	10-20	C	1		
G2	Cherry Field Maple Hawthorn Holly	9	As On Plan				0	160	192	11.58	Y	F	Group of young tree, saplings and scrub of no merit	10-20	C	1		
G3	Field Maple Oak	13	As On Plan				2	190	228	16.32	MA	F	Typical form and condition Some ivy covered stems	10-20	C	1		
T7	Cherry	13	3	5	5	5	1	310	372	43.45	MA	F	Some ivy on stem Typical form and condition Trifurcates at approx 1.3m	10-20	C	1,2		
T8	Field Maple	13	2	2	2	3	3	310	372	43.45	MA	F	Bifurcates at 0.5m Uneven crown due to competition	10-20	C	1		
T9	Field Maple	14	5	3	3	2	3	210	252	19.94	MA	F	Bifurcates at 0.5m Uneven crown due to competition Some bark wounds on stem	10-20	C	1		
T10	Ash	13	3	1	3	4	4	180	216	14.65	MA	F	Bifurcates at 0.5m Uneven crown due to competition Minor dead wood	10-20	C	1		

			Canopy Spread															
Tree Ref. No.	Species (Common Name)	Height (m)	N	E	S	W	Grnd Clrnc	DBH (mm)	RPR (cm)	RPA (m)	Age class	Gen Cond	Structural Defects/Comments	Estimated remaining contribution (BS 5837)	BS Cat	BS Sub Cat	Prelim Tree Work Recommendations	
T11	Field Maple	12	5	1	3	5	1	260	312	30.57	MA	F	Bifurcates at 0.5m Ivy and bramble on stem Uneven crown due to competition	10-20	C	1		
T12	Field Maple	8	4	1	2	4	1	210	252	19.94	MA	F	Bark wound on main stem Bramble in crown Uneven due to competition	10-20	C	1		
G4	Field Maple	13	As On Plan				1	180	216	14.65	MA	F	Typical form and condition of little merit	10-20	C	1		
T13	Oak	13	1	1	2	5	3	220	264	21.88	MA	F	Uneven crown due to competition	10-20	C	1		
T14	Field Maple	13	4	5	4	5	1	220	264	21.88	MA	F	Multi stem Uneven crown due to competition	10-20	C	1		
T15	Ash	14	3	4	3	5	1	490	588	108.60	MA	F	Bifurcates at 1m with tight union Minor Deadwood	20-40	B	1		
G5	Alder Field Maple Oak Ash Hawthorn	14	As On Plan				1	210	252	19.94	MA	F	Deadwood present. Uneven/ fastigiated form due to competition	10-20	C	1		
T16	Ash	14	4	2	2	4	3	230	276	23.92	MA	F	Dead wood present. Fastigiated form due to competition	10-20	C	1		

			Canopy Spread															
Tree Ref. No.	Species (Common Name)	Height (m)	N	E	S	W	Grnd Clrnc	DBH (mm)	RPR (cm)	RPA (m)	Age class	Gen Cond	Structural Defects/Comments	Estimated remaining contribution (BS 5837)	BS Cat	BS Sub Cat	Prelim Tree Work Recommendations	
T17	Ash	14	4	2	4	4	3	210	252	19.94	MA	F	Dead wood present. Fastigiated form due to competition	10-20	C	1		
T18	Ash	14	3	6	2	3	2	380	456	65.29	MA	F	Uneven crown due to competition Bifurcates at 0.5m Ivy on stem	10-20	C	1		
T19	Field Maple	14	3	5	4	3	0	460	552	95.68	MA	F	Multi stem tree Uneven crown due to competition	10-20	C	12		
T20	Field Maple	14	3	3	4	4	1	340	408	52.27	MA	F	Slightly suppressed by competition on one side, although has nice form. Trifurcates at 1m	20-40	B	1,2		
G6	Field Maple, Alder, Hawthorn, Ash	14	As On Plan				0	240	288	26.04	MA	F	Mixed Group Typical form and condition	10-20	C	1		
G7	Field Maple Cherry Birch Alder Oak Ash Hazel	14	As On Plan				0	220	264	21.88	MA	F	Mixed Group Typical form and condition	10-20	C	1,2		
T21	Field Maple	13	3	3	3	3	2	220	264	21.88	MA	P	Multiple, significant bark wounds	40	R	1	Remove	

			Canopy Spread															
Tree Ref. No.	Species (Common Name)	Height (m)	N	E	S	W	Grnd Clrnc	DBH (mm)	RPR (cm)	RPA (m)	Age class	Gen Cond	Structural Defects/Comments	Estimated remaining contribution (BS 5837)	BS Cat	BS Sub Cat	Prelim Tree Work Recommendations	
T22	Oak	13	2	6	2	1	2	310	372	43.45	MA	F	Uneven crown due to competition	20-40	C	1,2		
T23	Ash	14	5	5	2	4	1	320	384	46.30	MA	F	Ivy on stem slightly suppressed crown due to competition	20-40	B	1,2		
T24	Field Maple	12	3	3	3	4	3	240	288	26.04	MA	F	Bifurcates at 0.5m Large wound on one stem	10-20	C	1	Remove damaged stem	
T25	Hawthorn	7	4	4	4	4	0	400	480	72.35	MA	F	Messy crown. Next to fence	10-20	C	1		
T26	Ash	14	4	4	2	2	5	230	276	23.92	MA	F	Fastigiated form due to competition. Minor deadwood present	10-20	C	1		
T27	Ash	14	5	2	2	4	5	270	324	32.96	MA	F	Uneven form due to competition Ivy on main stem	10-20	C	1		
T28	Ash	16	5	4	5	4	0	290	348	38.03	MA	F	Typical form and condition Minor deadwood present	20-40	B	1		
T29	Horse Chestnut	13	5	6	8	6	0	750	900	254.5	MA	F	Great specimen Dead ivy on stem	20-40	B	1,2		
T30	Ash	12	3	2	4	5	2	290	348	38.03	MA	F	Ivy covered stem Typical form and condition	10-20	C	1,2		

			Canopy Spread															
Tree Ref. No.	Species (Common Name)	Height (m)	N	E	S	W	Grnd Clrnc	DBH (mm)	RPR (cm)	RPA (m)	Age class	Gen Cond	Structural Defects/Comments	Estimated remaining contribution (BS 5837)	BS Cat	BS Sub Cat	Prelim Tree Work Recommendations	
T31	Field Maple	7	5	1	1	4	0	320	384	46.30	MA	F	Twin stem of little merit. Bark wounds present	10-20	C	1,2		
T32	Alder	12	4	3	3	4	3	210	252	19.94	MA	F	Large wound on stem Should be removed due to proximity To railway	<10	R	1	Remove	
T33	Field Maple	6	2	1	3	5	0	140	168	8.86	Y	F	Bark wounds on stem	<10	R	1		
T34	Elder	6	4	4	4	4	0	520	624	122.30	MA	F	Ivy covered multi stem	10-20	C	1		
T35	Hawthorn	10	6	7	6	7	1	780	936	275.09	V	F	Veteran tree of good quality Ivy in crown Deadwood present Multi stem	20-40	B	1	Would benefit from crown clean Deadwood reduction and removal of ivy	
T36	Ash	13	4	4	4	3	3	310	372	43.45	MA	P	Ring barked tree	<10	R	1		
T37	Field Maple	11	1	3	4	3	2	230	276	23.92	MA	P	Multiple severe bark wounds	<10	R	1		
G8	Ash Field Maple Oak	13	As On Plan				0	200	240	18.09	MA	F	Some ivy covered stems Dead wood and bark wounds	10-20	C	1		

			Canopy Spread															
Tree Ref. No.	Species (Common Name)	Height (m)	N	E	S	W	Grnd Clrnc	DBH (mm)	RPR (cm)	RPA (m)	Age class	Gen Cond	Structural Defects/Comments	Estimated remaining contribution (BS 5837)	BS Cat	BS Sub Cat	Prelim Tree Work Recommendations	
T38	Silver Birch	12	3	3	3	3	0	200	240	18.09	MA	F	Typical form and condition	10-20	C	1		
T39	Field Maple	13	4	4	4	4	2	250	300	28.26	MA	F	Twin stem. Include unions and bark wounds	10-20	C	1		
T40	Silver Birch	16	6	6	2	2	0	280	336	35.45	MA	F	Ivy on stem Nice Specimen	20-40	B	1,2		
T41	Silver Birch	14	4	4	4	4	0	250	300	28.26	MA	F	Ivy on stem Nice Specimen	20-40	B	1,2		
T42	Silver Birch	16	4	4	4	4	5	260	312	30.57	MA	F	Nice specimen Ivy on stem	20-40	B	1		
T43	Cherry	14	6	5	2	3	1	360	432	58.60	MA	F	Trifurcates at 2m Ivy on stem Minor dead wood	10-20	C	1,2		
G9	Field Maple, Cherry, Hawthorn, Ivy, Hazel, Oak, Bramble	13	As On Plan				0	300	360	40.69	MA	F	Dead wood present, Ivy covered stems. Group of mixed species heavily overgrown with ivy and, in some places, Bramble. Would benefit from management.	40+	B	1,2		
T44	Hawthorn	8	4	4	4	4	0	800	960	289.38	MA	F	Ivy covered, messy crown.	20-40	B	1,2	Would benefit from crown clean.	

			Canopy Spread															
Tree Ref. No.	Species (Common Name)	Height (m)	N	E	S	W	Grnd Clrnc	DBH (mm)	RPR (cm)	RPA (m)	Age class	Gen Cond	Structural Defects/Comments	Estimated remaining contribution (BS 5837)	BS Cat	BS Sub Cat	Prelim Tree Work Recommendations	
T45	Sycamore	11	5	4	4	4	0	360	432	58.60	MA	F	Typical form and condition. Lots of epicormic growth and Ivy on stem.	20-40	B	1,2		
G10	Field Maple, Silver Birch, Willow, Ash, Alder, Oak	13	As On Plan				0	310	372	43.45	MA	F	Group more open than others on site and contains some significant specimens. Some Ivy covered stems. Twin-stem Willow to the south of group has one wounded stem.	20-40	B	1,2	Remove wounded stem on Willow	
G11	Sycamore	12	As On Plan				0	330	396	49.24	MA	F	Offsite. Situated on Bank next to path.	20-40	B	1,2		
T46	Sycamore	13	5	5	5	5	0	250	300	28.26	MA	F	Multi-stem, typical form and condition with ivy present on stems.	20-40	B	1,2		
T47	Sycamore	13	5	5	5	5	0	250	300	28.26	MA	F	Multi-stem, typical form and condition with ivy present on stems.	20-40	B	1,2		
T48	Sycamore	13	5	5	5	5	0	250	300	28.26	MA	F	Multi-stem, typical form and condition with ivy present on stems.	20-40	B	1,2		

			Canopy Spread															
Tree Ref. No.	Species (Common Name)	Height (m)	N	E	S	W	Grnd Clrnc	DBH (mm)	RPR (cm)	RPA (m)	Age class	Gen Cond	Structural Defects/Comments	Estimated remaining contribution (BS 5837)	BS Cat	BS Sub Cat	Prelim Tree Work Recommendations	
T49	Sycamore	13	5	5	5	5	0	250	300	28.26	MA	F	Multi-stem, typical form and condition with ivy present on stems.	20-40	B	1,2		
T50	Sycamore	10	4	4	4	4	0	200	240	18.09	MA	F	Twin Stem. Typical form and condition, Ivy on stem.	10-20	C	1,2		
T51	Sycamore	10	3	3	3	3	0	200	240	18.09	MA	F	Twin Stem. Typical form and condition, Ivy on stem.	10-20	C	1,2		
T52	Sycamore	13	6	4	3	4	1	370	444	61.90	MA	F	Typical form and condition, Ivy on stem.	20-40	B	1,2		
G12	Scrub species and small trees: Bramble, Hawthorn, Sycamore, Laburnum	6	As On Plan				0	160	192	11.58	MA	F	Messy group of self-set trees and scrub species	10-20	C	1,2		
T53	Sycamore	12	6	5	6	5	0	380	456	65.29	MA	F	Twin stem with lots of epicormic growth, Ivy covered. Major dead wood present. Offsite.	20-40	B	1,2		
T54	Scots Pine	8	3	3	3	3	0	220	264	21.88	MA	F	Offsite. Typical form and condition.	10-20	C	1,2,		
T55	Silver Birch	13	3	4	4	4	1	310	372	43.45	MA	F	Offsite. Typical form and condition. Nice specimen	20-40	B	1,2		

			Canopy Spread															
Tree Ref. No.	Species (Common Name)	Height (m)	N	E	S	W	Grnd Clrnc	DBH (mm)	RPR (cm)	RPA (m)	Age class	Gen Cond	Structural Defects/Comments	Estimated remaining contribution (BS 5837)	BS Cat	BS Sub Cat	Prelim Tree Work Recommendations	
T56	Hawthorn	7	4	4	4	4	0	250	300	28.26	MA	P	Mostly dead, contains mistletoe in canopy.	<10	R	1,2		
T57	Hawthorn	7	3	3	3	3	0	200	240	18.09	MA	F	Multi-stem, Mistletoe in canopy and overgrown with bramble.	10-20	C	1,2		
T58	Hawthorn	8	4	5	4	4	0	210	252	19.94	MA	F	Ivy and Mistletoe in canopy. Multi-stem.	10-20	C	1,2		
T59	Hawthorn	8	6	3	3	3	0	200	240	18.09	MA	F	Ivy and Mistletoe in canopy. Multi-stem in poor condition	<10	R	1		
T60	Hawthorn	9	4	5	2	4	0	430	516	83.60	MA	F	Messy form with dead wood and Mistletoe present	10-20	C	1,2	Remedial works would be of benefit	
T61	Elder	7	2	2	6	2	0	440	528	87.54	MA	P	Leans heavily over neighboring garden, evidence of ground heave- should be felled.	<10	R	1	Remove	
T62	Hawthorn	8	3	1	4	5	1	410	492	76.01	MA	P	Heavy wound on stem, Ivy and Mistletoe present.	<10	R	1	Remove	
T63	Hawthorn	6	1	2	5	2	2	180	216	14.65	MA	P	Small Hawthorn with severe stem wounds	<10	R	1	Remove	

			Canopy Spread															
Tree Ref. No.	Species (Common Name)	Height (m)	N	E	S	W	Grnd Clrnc	DBH (mm)	RPR (cm)	RPA (m)	Age class	Gen Cond	Structural Defects/Comments	Estimated remaining contribution (BS 5837)	BS Cat	BS Sub Cat	Prelim Tree Work Recommendations	
T64	Elder	4	5	1	1	1	0	210	252	19.94	MA	F	Collapsed tree	<10	R	1	Remove	
T65	Hawthorn	9	6	3	5	3	0	380	456	65.29	MA	F	Twin-stem tree with both stems leaning. Large cavity on one stem, wound on the other.	<10	R	1	Remove	
T66	Hawthorn	4	7	2	1	2	0	400	480	72.35	MA	F	Large, collapsed Hawthorn	<10	R	1	Remove	
T67	Silver Birch	10	3	3	3	3	0	210	252	19.94	MA	F	Typical form and condition	10-20	C	1,2		
T68	Cypress	10	3	3	3	3	0	210	252	19.94	MA	F	Typical form and condition	10-20	C	1,2		
T69	Hawthorn	6	3	3	3	3	0	210	252	19.94	MA	F	Ivy covered tree of no merit.	10-20	C	1,2		
T70	Hawthorn	6	5	4	3	2	0	240	288	26.04	MA	F	Multi-stem with messy crown and Mistletoe present	10-20	C	1,2		

			Canopy Spread															
Tree Ref. No.	Species (Common Name)	Height (m)	N	E	S	W	Grnd Clrnc	DBH (mm)	RPR (cm)	RPA (m)	Age class	Gen Cond	Structural Defects/Comments	Estimated remaining contribution (BS 5837)	BS Cat	BS Sub Cat	Prelim Tree Work Recommendations	
T71	Elder	9	4	4	4	1	0	240	288	26.04	MA	F	Typical form and condition, of no real merit. Bird's nest in crown	10-20	C	1,2		
T72	Elder	7	5	2	3	3	0	200	240	18.09	MA	F	Multi-stem. Typical form and condition, of no real merit.	10-20	C	1,2		
T73	Hawthorn	8	4	3	5	3	0	390	468	68.77	MA	F	Multi-stem, of no real merit. Dead wood present, Ivy and Bramble covered with messy crown.	10-20	C	1,2		
G13	Hawthorn	9	As On Plan				0	460	552	95.68	MA	F	Ivy covered Hawthorns of no merit. Mistletoe in crown.	10-20	C	1,2		
T74	Walnut	12	7	6	6	5	3	500	600	113.04	MA	F	Offsite	20-40	B	1,2		
T75	Cypress	13	6	5	4	4	0	490	588	108.56	MA	F	Offsite, typical form and condition although has messy crown.	20-40	C	1,2		

			Canopy Spread															
Tree Ref. No.	Species (Common Name)	Height (m)	N	E	S	W	Grnd Clrnc	DBH (mm)	RPR (cm)	RPA (m)	Age class	Gen Cond	Structural Defects/Comments	Estimated remaining contribution (BS 5837)	BS Cat	BS Sub Cat	Prelim Tree Work Recommendations	
T76	Walnut	12	4	4	6	6	0	490	588	108.56	MA	F	Offsite, typical form and condition and covered in Ivy.	20-40	B	1		
T77	Cypress	9	5	5	5	5	0	670	804	202.97	MA	F	Offsite, messy crown and of no aesthetic value. Dead wood present.	10-20	C	1,2		
T78	Elder	7	4	4	4	4	0	800	960	289.38	MA	F	Typical form and condition with messy crown containing Ivy.	10-20	C	1		
T79	Laburnham	6	4	4	4	4	2	300	360	40.69	MA	F	Typical form and condition.	10-20	C	1,2		
T80	Elder	7	3	3	3	3	0	230	276	23.92	MA	D	Dead Stem	<10	R	1	Remove	
T81	Holm Oak	13	7	7	7	7	0	900	1080	366.25	MA	F	Excellent specimen, Offsite	40+	A	1,2		
T82	Elder	7	3	3	3	3	0	230	276	23.92	MA	D	Dead Stem	<10	R	1		

			Canopy Spread															
Tree Ref. No.	Species (Common Name)	Height (m)	N	E	S	W	Grnd Clrnc	DBH (mm)	RPR (cm)	RPA (m)	Age class	Gen Cond	Structural Defects/Comments	Estimated remaining contribution (BS 5837)	BS Cat	BS Sub Cat	Prelim Tree Work Recommendations	
G14	Hawthorn	6	As On Plan				0	420	504	79.76	MA	F	Group of multi-stem Hawthorns with Ivy covered stems and messy crowns.	10-20	C	1,2		
T83	Elder	7	3	4	3	3	0	500	600	113.04	MA	F	Large Elder completely covered in Ivy	10-20	C	1,2		
T84	Sycamore	11	4	1	3	4	1	310	372	43.45	MA	F	Offsite tree, typical form and condition. Uneven crown due to competition.	10-20	C	1,2		
T85	Sycamore	13	7	6	6	6	0	670	804	202.97	MA	F	Trifurcates at 0.5m.	20-40	B	1,2		
T86	Ash	13	9	8	6	8	1	1300	1560	764.15	MA	F	Excellent specimen with very few faults, especially considering its age.	20-40	B	1		
G15	Elder, Hawthorn	13	As On Plan				0	300	360	40.69	MA	F	Mixed group of trees in generally poor condition with some collapsed specimens. Does provide effective screen, although would benefit from quite drastic management	10-20	C	1,2, 3	Remove fallen/damaged trees within group.	

Tree Schedule Explanatory Notes

Ref.no	Identifies trees, groups and hedges on the accompanying plan.
Species	Common names are provided to aid wider comprehension.
Height	Describes the approximate height of the tree measured in metres from ground level
Canopy Spread	Indicates the crown radius from the base of the tree in four compass directions, recorded to the nearest metre.
Ground Clearance	Height of crown clearance above adjacent ground in metres.
DBH (mm)	DBH is the diameter of the stem measured in cm at 1.5m from ground level for single stemmed trees or just above root flare for multi-stemmed trees. Stem Diameter may be estimated where access is restricted.
RPR (cm)	Root Protection Radius (RPR) is area required to be protected measured radially from the trunk centre.
RPA (m²)	Root Protection Area (RPA) is the minimum rooting area in m ² which should remain undisturbed around each tree.
Age Class	Age of the tree expressed as Y- Young, MA- Middle-Aged, EM- Early Mature, M- Mature or OM- Over-Mature
General Condition	Overall condition of tree expressed as :Good, Fair, Poor, Dead
Structural defects/Comments	May include general comments about growth characteristics, how it is affected by other trees and any previous surgery works. Also specific problems such as dead wood, pests, diseases, broken limbs. Etc
Estimated Remaining Years	Categorised in year bands of less than 10, 10-20, 20-40, more than 40.
BS Category	B.S. Cat refers to (BS 5837 :2005 Table 1) and refers to tree/overall group quality and value; 'A' - High; 'B' - Moderate; 'C' - Low; 'R' - Remove.
Sub Category	Sub Cat refers to the retention criteria values where 1 is arboricultural, 2 is landscape and 3 is cultural including conservational, historic and commemorative