

**ARBORICULTURAL REPORT
to BS 5837:2005
at
Old Library Site at Chichester University
Upper Bognor Road
Bognor Regis
Sussex
PO20**

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1. Introduction

1.1 Purpose of the Report

- 1.1.1 A report is required at **Chichester University, Bognor Regis**, to provide detailed, independent, arboricultural advice on the trees present, in the context of potential development.

1.2 Terms of Reference

- 1.2.1 I am instructed by Peter Harrison of WYG Environment, to visit the site and prepare my findings in a report.
- 1.2.2 For this purpose I have been supplied with a topographical survey.

1.3 Scope of the Report

- 1.3.1 This report is compiled in accordance with *BS 5837:2005 Trees in relation to construction*.
- 1.3.2 Preliminary recommendations are given with a view to the long-term management of a sustainable tree cover.
- 1.3.3 All trees within the site boundary with a stem diameter above 75mm are included.
- 1.3.4 Where applicable trees outside the site boundary, but close enough to be affected by the proposed development, are included.
- 1.3.5 The specific design of any proposed development is not generally taken into account at this stage.

1.4 Survey details

- 1.4.1 The survey took place during the month of June 2010.
- 1.4.2 The survey was conducted by David Venables
- 1.4.3 Inspection was made at ground level. Further investigation, such as climbed inspections or decay detection surveys, may be recommended where appropriate.
- 1.4.4 Measurements were obtained using clinometers, specialist tapes or electronic distometers. Where this was not possible measurements were estimated.

2. Site Description

2.1 Land Use

- 2.1.1 The site is currently an area of campus for Chichester University in Bognor Regis.

2.2 Topography

- 2.2.1 The site slopes gently from the south down towards the northern boundary with many little variations.

2.3 Treescape

- 2.3.1 Surrounding the site is a residential area containing many mature garden and street trees.
- 2.3.2 The trees on this site have a significant impact on the local treescape.

2.4 Visual Amenity Value

- 2.4.1 The trees on site collectively provide a reasonable visual amenity to the surrounding area.

2.5 Age Class Mix

- 2.5.1 The trees surveyed ranged in age from semi-mature to mature. However, the trees were predominantly of a mature age.

2.6 Species Diversity

- 2.6.1 Species surveyed include Sycamore, Ash, Yew, Holly, Crab Apple, Sweet Gum, Cherry, Bird Cherry, Alder, Oak, Rowan and Silver Birch.

3. Status of the Trees

- 3.1 A check was made on 28th of June 2010 with: ***Arun District Council.***

We are currently in the process of checking the protective status of the trees and will inform you as soon as we receive the results.

No work should be done to any trees until the protective status of the trees has been identified and permission has been granted.

4. Tree Descriptions and Recommendations

- 4.1 Full details of all individual trees surveyed are recorded in the tables at **Appendix 1**. A full explanation of the tables can be found at **Appendix 2**. Please refer also to the Tree Constraints Plan at **Appendix 6** for tree locations.

5. Discussion

5.1 Tree Condition & Recommended Works

- 5.1.1 The tree survey revealed a total of 38 items of vegetation (36 individual trees and 2 groups of trees). Of these, 12 trees were identified as retention category 'B', 18 trees and 2 groups were identified as retention category 'C' and 6 trees were identified as retention category 'R'. No retention category 'A' trees were identified on this occasion. Please refer to **Appendix 2** for retention category and definition criteria.
- 5.1.2 **T191, T197, T198, T207, T216** and **T220** were identified as retention category 'R'. These trees require removal for arboricultural reasons regardless of any on site development, detailed below:
- **T191** and **T216** are considered to be unsafe and should be removed as soon as it is reasonably practicable; their removal is of **high priority**.
 - **T197, T198, T207** and **T220** have been recommended for removal to prevent them from becoming dangerous trees or in order to benefit adjacent trees; their removal is of a **lower priority**.
- 5.1.3 Tree pruning works are recommended for reasons of public safety, as detailed at **Appendix 1**. Attention is drawn to **T202** and **T217**, which are currently in a poor condition. The recommended work should be carried out as a matter of **moderate priority**.
- 5.1.4 Those trees which have defects within their crowns (**T209**) which could not be investigated from ground level, as detailed at **Appendix 1**, should be climbed and aerially inspected to determine the extent of these defects. Based on the findings of this climbed investigation, recommendations can be made as to what action, if any, the trees require.
- 5.1.5 Where a full detailed inspection of trees **T208** and **T218** was inhibited by the presence of Ivy or understorey vegetation, as detailed at **Appendix 1**, it is advised that these trees be re-inspected for any possible defects when the Ivy or understorey vegetation has been removed.
- 5.1.6 **G195, T217** and **T224** have been noted to have significant structural or physiological defects, as detailed at **Appendix 1**, should be monitored (re-inspected and re-assessed) on an annual basis to assess if their condition is still acceptable (the defects observed may lead to the early demise of the tree or render it unsafe in the future).
- 5.1.7 Those trees which overhang the public footpaths or public highways, detailed at **Appendix 1**, shall require future maintenance in order to maintain clearance heights for vehicular or pedestrian traffic. These heights should be 5.6m above a road and 2.5m above a footpath.

- 5.1.8 The age diversity of existing trees on site is poor and a proposed development would improve this by incorporating a Tree Planting Scheme which introduces younger trees of a variety of suitable species.

5.2 Potential Arboricultural Implications & Design Advice

- 5.2.1 The details of the proposed development are not known at present. However, the following comments can be made about the site in terms of its tree cover in relation to a potential development.
- 5.2.2 During development the part of the tree most commonly under threat, and most commonly ignored, is the rooting system. When trees are damaged, particularly the roots, their long-term health and stability can be affected. Most development activity can have an impact on the future condition and safety of a tree, and therefore careful planning and management of tree protection should ensure a continued sustainable tree cover with minimal stress to existing trees.
- 5.2.3 There are a number of high amenity trees within this site. They will enhance any proposed development and care should be taken at the design stage to ensure that these trees are retained.
- 5.2.4 In order to ensure that the retained trees on site are properly protected a Construction Exclusion Zone (CEZ) must be created, based on the rooting area of the tree. For the purpose of development the rooting area is known as the Root Protection Area or RPA. The RPA of each tree or group is marked on the Tree Constraints Plan at **Appendix 6** and represents the rooting zone that should not be disturbed. The RPA of each tree should be considered during the layout phase of development.
- 5.2.5 Damage caused by any construction activity such as demolition, soil stripping, and provision of services needs to be considered at the design stage. Care should be taken to avoid damage to tree roots when existing structures such as tarmac surfaces are removed within a RPA.
- 5.2.6 The laying of access roads, driveways, parking areas or any other hard surfaces planned in proximity to retained trees needs to be considered. There are many solutions available to construct hard surfaces over RPAs without causing damage to trees.
- 5.2.7 Boundary walls or other light structures can be constructed without damage to roots through the use of piled foundations rather than the more traditional strip foundations.
- 5.2.8 The location of drainage and utilities within the RPA can be achieved if need be, using special techniques and supervision.
- 5.2.9 The position of the site compound is a major consideration. It is recommended that this, which typically includes the site office, facilities, toilets, storage of materials and

parking, is located away from trees and outside the RPA.

- 5.2.10 Consideration must be given to movement of both vehicle and pedestrian traffic. If possible traffic should be diverted away from the RPAs. If this is not possible a range of temporary surfaces are available to distribute the weight of traffic and allow the roots to receive moisture and air.
- 5.2.11 Generally, the alteration of ground levels within the RPA is not acceptable, however, should ground levels need to be lowered in areas adjacent to trees or within the minimum distance recommended, appropriate measures should be taken to minimise the detrimental effects on the trees and their root systems. With regards to raising levels, it is necessary to maintain adequate supplies of moisture and oxygen through the soil to the tree roots. Therefore, no material should be placed within the RPA without arboricultural advice.

6. Conclusions

- 6.1 The trees surveyed were generally found to be in fair condition.
- 6.2 We are currently checking to see if the trees are protected by a Tree Preservation Order or by virtue of the being in a Conservation Area.
- 6.3 Six trees have been recommended for removal for arboricultural reasons. These are discussed in **Section 5** and detailed at **Appendix 1**.
- 6.4 Some works were recommended for reasons of public safety and to ensure the long term health of the trees. These are summarised in **Section 5** and detailed at **Appendix 1**.
- 6.5 All development work carried out in close proximity to trees should be done so in a manner sympathetic to their needs. Otherwise the condition of the trees may deteriorate in the months and years following the development, leading to a loss of amenity and potentially hazardous trees.
- 6.6 Care should be taken at the design stage to ensure that the retained trees are protected. The protection of retained trees can be achieved by the creation of a Construction Exclusion Zone based on the Root Protection Area of a tree. The Root Protection Area of each tree or group is marked on the Tree Constraints Plan at **Appendix 6**.
- 6.7 The proposed development should be accompanied by an Arboricultural Method Statement (AMS) detailing the specific protection measures necessary for each tree. This should specify fencing standard and positions (the creation of the Construction Exclusion Zone), acceptable construction techniques and necessary tree works.

Appendices

Tree Ref.	Age Species Latin Name	Height (m)	Crown Height (m)	Diameter (cm)	Crown Spread N W E S		Observations	Recommendations	Physiological Condition	Structural Condition	Amenity Value	Life Expectancy (yrs)	Retention Category
T 187	Mature Yew <i>Taxus baccata</i>	9	0	Est. 65	5.5	5	Crown overhangs the footpath. Multi-stemmed at 4m with a slightly unbalanced crown. Growing on bankment. Epicormic shoots noted. No major visible defects.	No action required.	GOOD	GOOD	MOD	40+	B
T 188	Mature Holly <i>Ilex aquifolium</i>	8	15	Est. 50 at base	5	2	Crown overhangs the footpath. Multi-stemmed at ground level with a slightly unbalanced crown. Growing on bankment. Ivy. No major visible defects.	No action required.	GOOD	FAIR	MOD	20-40	B
T 189	Mature Holly <i>Ilex aquifolium</i>	6	0	Est. 60 at base	5.5	4.5	Crown overhangs the footpath. Multi-stemmed at ground level with a slightly unbalanced crown. Growing on bankment. Minor deadwood. No major visible defects.	No action required.	FAIR	FAIR	LOW	20-40	C
G 190	Mature Camellia <i>Camellia sp.</i>	To 7	From 0	<30	See plan		Three stems of dense shrubby trees. No major visible defects.	No action required.	FAIR	FAIR	LOW	10-20	C
T 191	Mature Unknown <i>Unknown</i>	7	3.5	37	4	4	Crown overhangs the footpath. Dead standing tree. Multi-stemmed at 3m with a balanced crown.	Remove.	DEAD	DEAD	DEAD	<10	R
T 192	Semi-mature Holly <i>Ilex aquifolium</i>	5	2	11	2	2	Crown overhangs the footpath. Multi-stemmed at 1.7m with a balanced crown. No major visible defects.	No action required.	GOOD	GOOD	LOW	20-40	C
T 193	Semi-mature Apple <i>Malus sp.</i>	6	2	8	1.5	1.5	Crown overhangs the footpath. Multi-stemmed at 2m with a balanced crown. Crown lifted in the past, healing well. Epicormic shoots noted. No major visible defects.	No action required.	FAIR	FAIR	LOW	10-20	C
T 194	Early-mature Crab Apple <i>Malus sylvestris</i>	6	2	14	2.5	2.5	Twin-stemmed at 1m with a slightly unbalanced crown. Minor deadwood. No major visible defects.	No action required.	FAIR	FAIR	LOW	10-20	C
G 195	Early-mature Mixed <i>Mixed</i>	To 10	From 0	<25	See plan		Mixed shrubby group. Species include: Fir and Cypress sp. Fir looks to have limited long term future	Monitor condition of Fir annually.	FAIR	FAIR	LOW	10-20	C
T 196	Mature Liquid Amber <i>Liquidambar styraciflua</i>	12	1	40	5	4	Twin-stemmed at 2m with a slightly unbalanced crown. Crown lifted in the past, leaving stubs with decay. Minor deadwood. No major visible defects.	No action required.	GOOD	GOOD	MOD	40+	B

Tree Ref.	Age Species Latin Name	Height (m)	Crown Height (m)	Diameter (cm)	Crown Spread N W E S			Observations	Recommendations	Physiological Condition	Structural Condition	Amenity Value	Life Expectancy (yrs)	Retention Category
T 197	Mature Cherry <i>Prunus sp</i>	5	1	28	4 2 3.5 3.5			Die back in the crown. Limited long term future. Multi-stemmed at 1.7m. Minor signs of phytophthora. Exposed root plate, damaged in the past, healing well.	Remove.	POOR	POOR	LOW	<10	R
T 198	Early-mature Bird Cherry <i>Prunus padus</i>	6	1.5	23	3.5 3.5 3 2.5			Twin-stemmed at 0.5m with a slightly unbalanced crown. Exposed root plate. Limited long term future. Large stem wound from 0-0.5m with decay.	Remove.	FAIR	POOR	LOW	<10	R
T 199	Early-mature Bird Cherry <i>Prunus padus</i>	7	2	25	2.5 3.5 3 3.5			Multi-stemmed at 1.5m with a slightly unbalanced crown. Exposed root plate. No major visible defects.	No action required.	GOOD	GOOD	MOD	20-40	C
T 200	Early-mature Sycamore <i>Acer pseudoplatanus</i>	8	2	Est. 20	2 5 3.5 5			Crown overhangs the footpath and boundary. Limited long term future in current position, consider removal. Twin-stemmed at 1m with a slightly unbalanced crown. Growing very close to the wall. No major visible defects.	No action required.	FAIR	FAIR	LOW	40+	C
T 201	Mature Sycamore <i>Acer pseudoplatanus</i>	12	2	Est. 70 at base	Est. 6.5 7.5 7 9.5			Crown overhangs the road and boundary. Minor deadwood. Multi-stemmed at 5m with a slightly unbalanced crown. Full detailed inspection not possible due to Ivy. Included bark at stem junction. Epicormic shoots noted. No major visible defects.	No action required.	GOOD	FAIR	MOD	40+	B
T 202	Mature Oak <i>Quercus robur</i>	16	2	Est. 60 at base	Est. 6.5 7.5 7 9.5			Crown overhangs the boundary. Multi-stemmed at 6m with a slightly unbalanced crown. Deadwood. No major visible defects.	Remove deadwood.	GOOD	GOOD	MOD	40+	B
T 203	Mature Alder <i>Alnus sp.</i>	7	2	44	Est. 4 5.5 4 3.5			Crown overhangs the boundary. Minor deadwood. Twin-stemmed at 1.5m with a slightly unbalanced crown. One main stem that overhanging the boundary removed, leaving large stub. No major visible defects.	No action required.	GOOD	FAIR	MOD	20-40	C
T 204	Early-mature Sycamore <i>Acer pseudoplatanus</i>	11	2.5	Est. 40	Est. 5.5 5.5 4 3.5			Crown overhangs the boundary. Minor deadwood. Single stemmed and leaning with a slightly unbalanced crown. Epicormic shoots noted. Full detailed inspection not possible due to understorey vegetation. No major visible defects.	No action required.	GOOD	GOOD	MOD	40+	B
T 205	Early-mature Silver Birch <i>Betula pendula</i>	10	1	28	Est. 5.5 5 7 5.5			Twin-stemmed at 5.5m with a slightly unbalanced crown. Crown lifted in the past, healing well. No major visible defects.	No action required.	GOOD	GOOD	MOD	40+	B
T 206	Mature Oak <i>Quercus robur</i>	14	2	Est. 65	3.5 2.5 4 3.5			Crown overhangs the boundary. Multi-stemmed at 2m with a slightly unbalanced crown. Full detailed inspection not possible due to Ivy. Epicormic shoots noted. Minor deadwood. No major visible defects.	No action required.	GOOD	GOOD	MOD	40+	B

Tree Ref.	Age Species Latin Name	Height (m)	Crown Height (m)	Diameter (cm)	Crown Spread N W E S			Observations	Recommendations	Physiological Condition	Structural Condition	Amenity Value	Life Expectancy (yrs)	Retention Category
T 207	Early-mature Bird Cherry <i>Prunus padus</i>	7	2	Est. 40 at base	Est. 3 6 6.5 6.5			Crown overhangs the boundary. Phytophthora on wound on northern stem. Multi-stemmed at ground level with an unbalanced crown. Suppressed by T20. Large area of deadwood with decay at base, fungal brackets present. Limited long term future.	Remove.	FAIR	POOR	LOW	<10	R
T 208	Mature Sycamore <i>Acer pseudoplatanus</i>	11	3	Est. 50 at base	Est. 5 4 3 4.5			Crown overhangs the boundary. Multi-stemmed at 1m with a slightly unbalanced crown. Full detailed inspection not possible due to Ivy. Minor deadwood.	Remove Ivy and re inspect.	FAIR	FAIR	MOD	20-40	C
T 209	Mature Ash <i>Fraxinus excelsior</i>	13	3	61	4 7 6 8			Crown overhangs the boundary. Twin-stemmed at 6m with a slightly unbalanced crown. Crown lifted in the past, healing well. Large cavity at stem junction with possible decay.	Aerially inspect.	GOOD	GOOD	MOD	40+	B
T 210	Mature Sycamore <i>Acer pseudoplatanus</i>	11	1.5	Est. 43	Est. 5 5 7 6.5			Crown overhangs the boundary. Multi-stemmed at 2.5m with a slightly unbalanced crown. Crown lifted in the past, healing well. No major visible defects.	No action required.	GOOD	FAIR	MOD	40+	B
T 211	Mature Cherry <i>Prunus sp</i>	5	1.5	29	3.5 3.5 3.5 3.5			Crown overhangs the car park. Multi-stemmed at 2.5m with a balanced crown. Crown lifted in the past, leaving stubs. Minor deadwood. No major visible defects.	No action required.	FAIR	FAIR	LOW	10-20	C
T 212	Early-mature Purple Sycamore <i>Acer pseudoplatanus</i>	8	1	27	4 4 4 4			Crown overhangs the road. Multi-stemmed at 1.5m with a balanced crown. No major visible defects.	No action required.	GOOD	GOOD	MOD	40+	B
T 213	Semi-mature Rowan <i>Sorbus aucuparia</i>	5	2.5	25 at base	4 3 4.5 1.5			Crown overhangs the footpath and road. Multi-stemmed at 0.3m with a slightly unbalanced crown and leaning. Crown lifted in the past, healing well.	No action required.	FAIR	POOR	LOW	10-20	C
T 214	Mature Cherry <i>Prunus sp</i>	5	2	27	2 4 2 4			Crown overhangs the footpath and road. Multi-stemmed at 7m with a slightly unbalanced crown. Crown lifted in the past, leaving stubs with decay. No major visible defects.	No action required.	FAIR	FAIR	LOW	10-20	C
T 215	Early-mature Bird Cherry <i>Prunus padus</i>	5	1.5	17	2.5 2.5 2.5 2.5			Crown overhangs the footpath and road. Multi-stemmed at 2m with a balanced crown. Minor deadwood. No major visible defects.	No action required.	FAIR	FAIR	LOW	10-20	C
T 216	Mature Cherry <i>Prunus sp</i>	8	1.5	43	5.5 5 4 4			Crown overhangs the footpath and road. Multi-stemmed at 2m with a slightly unbalanced crown. Large pruning wound with deadwood and decay at stem junction. Die back within the crown leaving minor deadwood. Limited long term future.	Remove.	POOR	POOR	MOD	<10	R

Tree Ref.	Age Species Latin Name	Height (m)	Crown Height (m)	Diameter (cm)	Crown Spread			Observations	Recommendations	Physiological Condition	Structural Condition	Amenity Value	Life Expectancy (yrs)	Retention Category
					N	W	E							
T 217	Mature Cherry <i>Prunus sp</i>	8	1.5	Est. 40 at base	3.5 5		4.5	Crown overhangs the road. Crown lifted in the past, leaving old wounds. Exposed rootplate with damage. One dead stem. Minor deadwood. Multi-stemmed at 1m with a slightly unbalanced crown.	Remove dead stem and monitor annually.	FAIR	FAIR	MOD	10-20	C
T 218	Semi-mature Sycamore <i>Acer pseudoplatanus</i>	10	2	-	5 4	4	4	Crown overhangs the road. Multi-stemmed at ground level with a slightly unbalanced crown. Full detailed inspection not possible due to understorey vegetation. No major visible defects.	Remove understorey vegetation and re - inspect.	FAIR	FAIR	LOW	20-40	C
T 219	Semi-mature Sycamore <i>Acer pseudoplatanus</i>	8	4.5	Est. 45	3 2		1.5	Single stemmed with a slight lean and a reasonably balanced crown. No major visible defects.	No action required.	FAIR	FAIR	LOW	10-20	C
T 220	Semi-mature Unknown <i>Unknown</i>	6	-	-	0.5 0.5	0.5	0.5	Dead stem covered in Ivy.	Remove.	DEAD	DEAD	DEAD	<10	R
T 221	Early-mature Sycamore <i>Acer pseudoplatanus</i>	9	5	Est. 20	3 3		4	Crown overhangs the footpath and road. Single stemmed with a slight lean and a reasonably balanced crown. Epicormic shoots noted. No major visible defects.	No action required.	FAIR	FAIR	MOD	40+	C
T 222	Early-mature Cherry <i>Prunus sp</i>	6	1.5	Est. 5	2 2	2	2	Multi-stemmed at 2m with a balanced crown. No major visible defects.	No action required.	FAIR	FAIR	LOW	10-20	C
T 223	Early-mature Unknown <i>N/A</i>	6	1.5	Est. 8	3 3	3	3	Multi-stemmed at 2m with a balanced crown. No major visible defects.	No action required.	FAIR	FAIR	LOW	10-20	C
T 224	Early-mature Cherry <i>Prunus sp</i>	6	2.5	Est. 15	4 4	4	4	Multi-stemmed at ground level with a balanced crown. Sparse crown. Limited long term future.	Monitor annually.	FAIR	FAIR	LOW	10-20	C

Appendix 2: Explanation of Tree Descriptions

A2.1 Measurements

A2.1.1 *HEIGHT* of the tree is measured from the stem base in metres. Where the ground has a significant slope the higher ground is selected.

A2.1.2 *CROWN HEIGHT* is an indication of the average height at which the crown begins.

A2.1.3 *STEM DIAMETER* is measured at 1.5 metres above (higher) ground level. Where the tree is multi-stemmed at this point; the diameter is measured close to ground level, just above the root buttress.

A2.1.4 *CROWN SPREAD* is measured from the centre of the stem base to the tips of the branches in all four cardinal points.

A2.2 Evaluations

A2.2.1 *AGE CLASS* of the tree is described as young, semi-mature, early-mature, mature, or over-mature.

A2.2.2 *PHYSIOLOGICAL CONDITION* is classed as good, fair, poor, or dead. This is an indication of the health of the tree and takes into account vigour, presence of disease and dieback.

A2.2.3 *STRUCTURAL CONDITION* is classed as good, fair or poor. This is an indication of the structural integrity of the tree and takes into account significant wounds, decay and quality of branch junctions.

A2.2.4 *LIFE EXPECTANCY* is classed as; less than 10 years, 10-20 years, 20-40 years, or more than 40 years. This is an indication of the number of years before removal of the tree is likely to be required.

A2.3 Retention Categories

A2.3.1 A (marked green on the plan) = retention most desirable.

These trees are of high quality and value with a good life expectancy. They may be further sub-divided as follows:

- A1) Particularly good examples; perhaps rare or unusual species, or forming an essential part of arboricultural features e.g. avenues.
- A2) Groups of trees having a significant landscape impact or with excellent screening properties, or those softening the effect of existing structures.
- A3) Those having significant conservation or historical value e.g. veteran trees.

A2.3.2 B (marked in blue on the plan) = retention desirable.

These trees are of moderate quality and value with a significant life expectancy. They may be further sub-divided as follows:

- B1) Trees that might be included in the high category but because of their numbers or slightly impaired condition, are downgraded in favour of the better individuals.
- B2) Groups of trees forming distinct landscape features, thereby attracting a higher collective rating than they might as individuals.
- B3) Trees with clearly identifiable conservation or other cultural benefits.

A2.3.3 C (marked in grey on the plan) = trees which could be retained.

These trees are of low quality and value, and are in adequate condition to remain until new planting could be established. They may be further sub-divided as follows:

- C1) Trees not qualifying in higher categories.
- C2) Groups of trees which do not form a distinct landscape feature.
- C3) Trees with very limited conservation or other cultural benefits.

A2.3.4 R (marked in red on the plan) = trees for removal.

These trees are in such a condition that any existing value would be lost within 10 years. This may be due to any of the following:

- 1) Failure is likely due to serious, irredeemable, structural defects.
- 2) Removal of other category R trees will render them exposed and unstable.
- 3) They are in serious, overall decline or are dead.
- 4) They are of low quality and suppressing adjacent trees of better quality.
- 5) Diseases are present which may affect the health of adjacent trees.

These trees should be removed or treated in such a way as to make them safe where they have high ecological value, such as in a woodland setting.

Appendix 3: General Guidelines

- A3.1 All work must be to BS 3998:1989 - '*Recommendations for tree work*'.
- A3.2 Staff carrying out the work must be qualified, experienced and ideally be Arboricultural Association approved contractors. They should be covered by adequate public liability insurance.
- A3.3 This report is based upon a visual inspection. The consultant shall not be responsible for events which happen after this time due to factors which were not apparent at the time, and the acceptance of this report constitutes an agreement with the guidelines and the terms listed in this report.
- A3.4 Any defects seen by a contractor or the employer that were not apparent to the consultant must be brought to the consultant's attention immediately.
- A3.5 No liability can be accepted by JCA Ltd in respect of the trees unless the recommendations of this report are carried out under the supervision of JCA and within JCA's timescale.
- A3.6 It is advisable to have trees inspected by an arboricultural consultant regularly. In this instance it is recommended that these inspections are made every year.

Appendix 4: Glossary of Terms & Abbreviations

Arboriculture	The cultivation of trees in order to produce individual specimens of the greatest ornament, for shelter or any primary purpose other than the production of timber.
Canker	Disease damaged area of a tree, usually caused by fungus or bacteria.
Co-dominant Stem	A stem which has grown in direct competition to the main stem and which has formed a substantial size influencing the appearance of the tree.
Crown Lift	The removal of the lowest branches, usually to a given height. It allows more residual light and greater clearance underneath for vehicles etc.
Crown reduce	The reduction of a tree's height or spread while preserving its natural shape.
Crown thin	The removal of some of the density of a tree's crown, usually 5-25% allowing more light through its canopy and reducing wind resistance.
Deadwood	Either dead branches, or a procedure involving the removal of dead, dying and diseased branches.
Dieback	Where branches are beginning to show signs of death usually at the tips in the crown.
Epicormic shoots	Small branches that grow in uncharacteristic clusters around the base or the stem of a tree, usually as a result of bad pruning or some other stress factor.
Formative pruning	The trimming of a tree to remove weaknesses and irregularities which may lead to problems. The formative pruning operation is aimed at reducing the potential for future weaknesses or problems within the tree's crown.
Included bark	Where the bark on two adjoining branches or stems is growing tight together, forming a joint with limited physical strength.
Pollarding	A method of tree management in which the main trunk of the tree is cut at about 4m, and the resulting branches are then cropped on a regular basis.
Remedial pruning	The removal of old stubs, deadwood, epicormic growth, rubbing or crossing branches and other unwanted items from the tree's crown. Sometimes referred to as crown cleaning.
RPA	Root Protection Area – The theoretical rooting area of a tree as defined in BS5837: 2005 <i>Trees in relation to construction</i> .
Topping	Topping is a form of pruning that removes terminal growth leaving a 'stub' cut end. Topping causes serious health problems to a tree.

Appendix 5: The Author's Qualifications

Principal Consultant and Managing Director

Jonathan Cocking *F.R.E.S., Tech. Cert. (Arbor.A), PDipArb (RFS) FArborA CBiol MSB. MICFor.* Jonathan is a Registered Consultant and Fellow of the Arboricultural Association and sits on its Professional Committee. He has 31 years experience in the Arboricultural profession and served for eight years as Senior Arboriculturist with a large local authority before establishing JCA in 1997. He has since developed JCA's portfolio of services and its extensive client base. Jonathan is a Chartered Biologist, a Chartered Arboriculturist and an Expert Witness with much experience of litigation work.

Technical Coordinator

Toby Thwaites *BSc (Hons), HND (Arboriculture).* Toby joined JCA in 1998 after graduating in Ecology at the University of Huddersfield and has since graduated in Arboriculture at the University of Lancashire. A former JCA team leader and Consulting Arboriculturist, Toby was promoted to Technical Coordinator and now oversees all office and on-site activities at JCA and is on hand to offer technical support and advice.

Consulting Staff

Andrew Bagshaw *FD (Arboriculture).* Andrew joined JCA in 2005 having gained several years experience in tree surgery and landscaping. He is trained in aerial rescue and is JCA's principal first aid person. Andrew is a JCA team leader, is QTRA qualified and manages an office of Consulting Arboriculturists. He is currently working towards a degree in Arboriculture at the University of Lancashire.

Adam Winson *BSc (Hons), ND (Arboriculture).* Adam is a Professional Associate of the Institute of Chartered Foresters and an Associate Member of the Institute of Ecology and Environmental Management. Prior to joining JCA Adam worked as a tree surgeon. During his BSc in Environmental Conservation he gained the CPRE award for best dissertation and he is currently working towards an MSc in Arboriculture and Urban Forestry.

Robert Godwin *BA (Hons) (Landscape Planning), MArborA.* Robert is a Professional Member of the Arboricultural Association and a Professional Associate of the Institute of Chartered Foresters. He has a degree in Landscape Planning & Management and has several years experience as a Consulting Arboriculturist. Robert is currently working towards an MSc in Arboriculture and Urban Forestry.

Victoria Black *FD (Arboriculture).* Victoria has been with JCA since 2002 building her knowledge of the Arboricultural business. She has recently obtained her foundation degree in Arboriculture at the University of Lancashire.

Andrew Bussey Andrew joined JCA having spent 12 years doing tree surgery for various private companies and a Local Authority. He has various NPTC qualifications, is QTRA qualified and is currently studying for his Arboricultural Technicians Certificate.

Toby Parsons *Cert. Arb. (RFS), Tech. Cert. (Arbor.A).* Toby joined JCA after spending 6 years working as a senior climber for various Arboricultural contractors in the East Midlands and the South-West. He has gained the Level 2 Certificate in Arboriculture (RFS), an Arboricultural Technicians Certificate and is QTRA qualified.

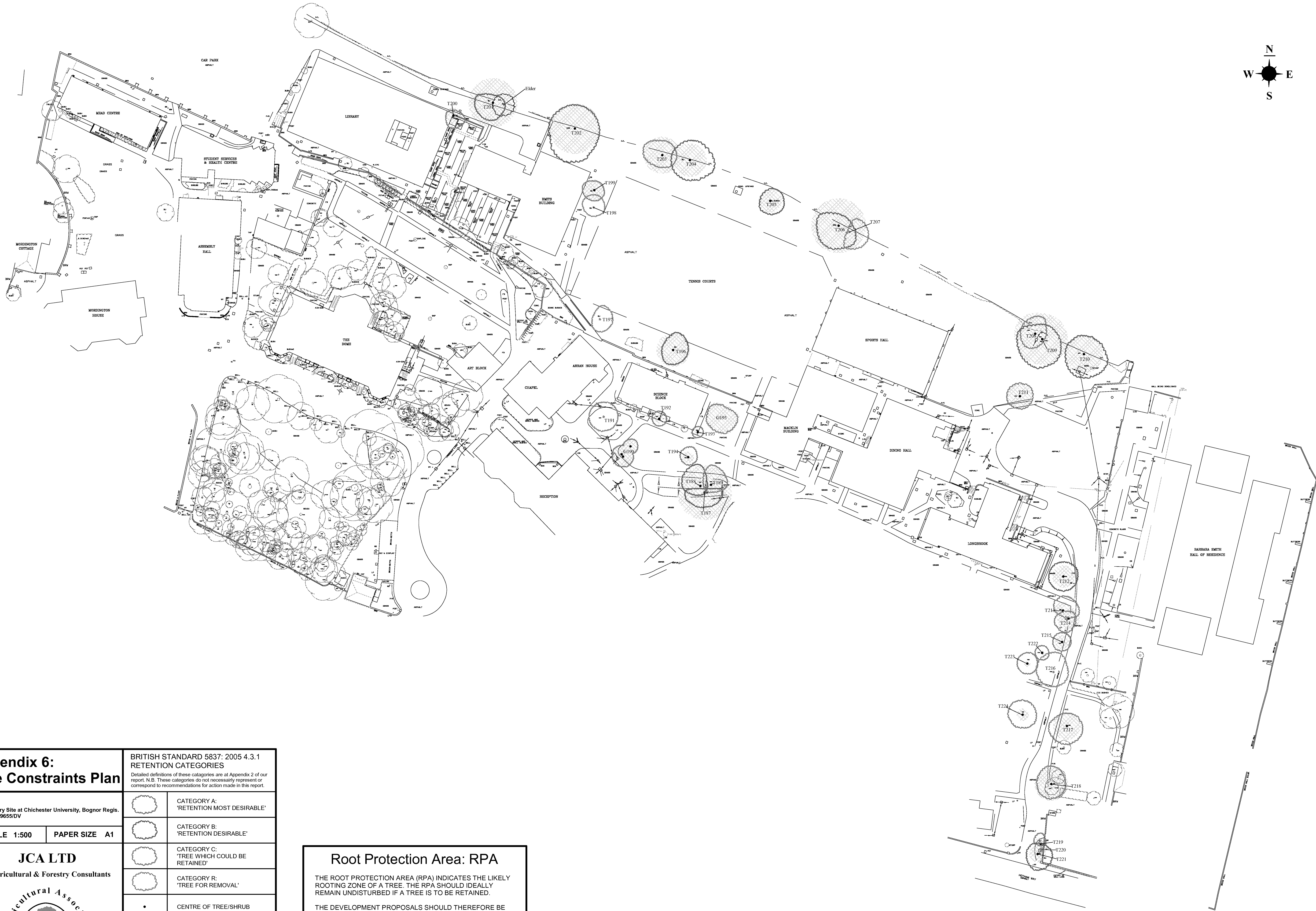
David Venables *BSc (Forestry).* David joined JCA in 2009 having achieved his degree at University of Wales, Bangor. David's work experience prior to joining JCA was as a Management Support Officer for the Forestry Commission at Delamere Nursery, Cheshire, where his responsibilities included carrying out health and safety inspections to ensure all sites and staff met relevant standards, assisting with the supervision of the workforce and the initiation of a GIS system for the nursery.

Raphael Skerratt *BSc (Forestry) FArborA.* Raphael covers the London area for JCA. He ran his own Arboricultural businesses since 1972 and is experienced in tree surveys for development, safety and subsidence purposes, and is an Expert Witness.

Administrative Staff

Andrew C Parker *GM, BA (Hons), PGCE.* Project Manager.
Sue Guest Administrative Team Leader.
Sally Whitwam Administrative Assistant.
Simeon Haigh *BSc (Hons).* IT Officer.

Catherine Cocking Accounts Manager.
Yasmin Hussain Administrative Assistant.
Liz Bone Trainee Administrative Assistant
Alec Fielden *Cert. Arb. (RFS).* CAD Technician.



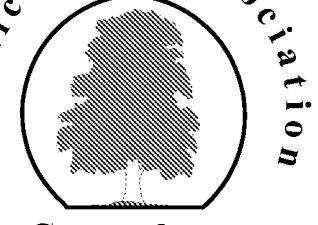
Appendix 6:
Tree Constraints Plan

TITLE:
Old Library Site at Chichester University, Bognor Regis.
JCA Ref: 9655/DV

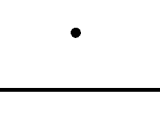
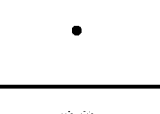
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Consultant

BRITISH STANDARD 5837: 2005 4.3.1 RETENTION CATEGORIES	
Detailed definitions of these categories are at Appendix 2 of our report. N.B. These categories do not necessarily represent or correspond to recommendations for action made in this report.	
	CATEGORY A: 'RETENTION MOST DESIRABLE'
	CATEGORY B: 'RETENTION DESIRABLE'
	CATEGORY C: 'TREE WHICH COULD BE RETAINED'
	CATEGORY R: 'TREE FOR REMOVAL'
	CENTRE OF TREE/SHRUB
	CENTRE OF TREE/SHRUB TO BE REMOVED
	ROOT PROTECTION AREA

Root Protection Area: RPA

THE ROOT PROTECTION AREA (RPA) INDICATES THE LIKELY ROOTING ZONE OF A TREE. THE RPA SHOULD IDEALLY REMAIN UNDISTURBED IF A TREE IS TO BE RETAINED.

THE DEVELOPMENT PROPOSALS SHOULD THEREFORE BE DESIGNED TO AVOID THE RPA OF ANY TREE WHICH IS TO BE RETAINED.

IF IT IS NECESSARY FOR THE DEVELOPMENT TO ENCROACH INTO THE RPA OF A TREE WHICH IS TO BE RETAINED THEN SPECIALIST CONSTRUCTION TECHNIQUES AND MATERIALS MUST BE CONSIDERED.

I hope that this report provides all the necessary information, but should any further advice be needed please do not hesitate to contact the author.

Signed

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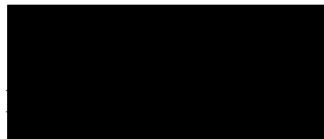
David Venables BSc (Forestry).

28th of June 2010

For and on behalf of **JCA Ltd**

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