

## Worthing Aquarena

Appendix:  
Tree Survey

June 2010

# **Arboricultural Report: Beach House Grounds and Aquarena, Lower Brighton Road, Worthing, May 2010.**

## **1. Summary.**

The development proposal is the construction of a new swimming pool within the existing Aquarena pool site and adjacent public open space, Beach House Grounds.

Many of the existing trees were planted as part of landscape restoration works after the Great Storm of 1987 which devastated the previous mature tree parkland setting of Beach House, a Listed building of historical and cultural importance. New landscaping and planting proposals for the development will need to integrate this with the existing landscape and gives the opportunity for a notable juxtaposition of the modern with traditional landscape design.

## **2. Introduction.**

Instructions have come from Wilkinson Eyre Architects, 24 Britton Street, London. EC1M 5UA.

The trees that could be affected have been surveyed and assessed with regard to the British Standard, Trees in relation to construction – Recommendations BS 5837:2005, the details of which are given in Appendix 1.

The purpose of this report is to inform the Architects and Worthing Borough Council on the impact of a proposed Planning Application to construct a new swimming pool on the trees within and around the site of the existing Aquarena and Public Open Space, Beach House Grounds.

The following information is included:

- A schedule of relevant trees including basic data and an assessment using BS 5837:2005 criteria.
- An appraisal of the impact on trees and associated local amenity.
- Guidance on appropriate tree protection measures for retained trees.

## **3. Location.**

The site is owned by Worthing Borough Council and is presently occupied by the Aquarena, Worthing's public swimming pool, a paddling pool and the grounds of Beach House, managed as Public Open Space with associated car parking areas.

The Aquarena has a small landscape element at the north side in the form of a rockery but now containing three, probably self set small trees. The paddling pool has a narrow belt of young screening trees again on the north side together with one prominent mature tree adjacent.

Beach House Grounds has a healthy stock of young and mature trees giving a typical parkland landscape of standard trees over grass. Beach House itself is surrounded by a mixed shrub border containing some trees on the north east side. The south side of the park borders the beach and promenade. There are three main groups of trees in addition to two notable veteran Holm Oak trees within the car park and in the highway both of which have significant defects:

- West of Beach House, predominantly young trees probably planted to replace losses in the Gale of 1987, within which there are some notable mature survivors. The species reflect the prevailing salt laden south westerly winds from The Channel, only a few hundred metres to the south, and comprise exposure tolerant Sycamore (*Acer pseudoplatanus*), Common Ash (*Fraxinus excelsior*), Holm Oak (*Quercus ilex*) and Corsican Pine (*Pinus nigra* var. *Maritima*) with occasional Horse Chestnut (*Aesculus hippocastanum*) and Common Lime (*Tilia Xeuorpaea*).
- East of Beach House, groups, again predominantly young Ash and Sycamore.
- South East of Beach House, a sparse group of mature Sycamore and Holm Oak together with a linear belt of young trees screening Peter Pans Playground managed by a concessionaire.

#### **4. The Survey.**

The height and spread of the trees has been estimated, the survey has used existing tree management software which records tree girths as categories only, giving an indication of their estimated girth class and therefore their size, this will need to be refined to give Root Protection Areas should any development proceed under appropriate Planning Conditions. Exact location plans of the proposals have not been seen and the assessment is therefore made on the basis of indicative drawings and landscape plans which have been available. Refinements will therefore need to be made as the project progresses. The tree quality categories from the British Standard and used in this report are as follows:

- Category B – Trees of moderate quality and value, expected to make a significant contribution for a minimum of 20 years.
- Category C – Trees of low quality and value but which could be retained for a minimum of 10 years to allow new planting to establish, or young trees with a stem diameter below 150mm.
- Category R – Trees, trees in such a condition that any existing value would be lost within 10 years or should in context be removed for reasons of sound arboricultural management.
- Sub category 1, mainly arboricultural values.
- Sub category 2, mainly landscape values.

- Sub category 3, mainly cultural, historic and conservation values.

**5. Arboricultural Implication Assessment.**

**5.1 Table 1: Summary of Impact on trees.**

<b>Impact</b>	<b>Reason</b>	<b>Tree No</b>	<b>Category</b>
Actual tree loss	Trees not considered a constraint to development by virtue of their small size, poor condition or position.	1573	R
		1574	R
		1066	C
		1065	C
		09451	C
		09449	R
		1086	R
		1087	C
		Trees within proposed building footprint	1576
	1577		B3
	1580		B3
	1581		B3
	1582		B3
	1583		B3
	1584		B3
	1585		B3
	1586		C2
	1587		B3
	1588		B3
	1589		B3
	1590		B3
	1592		B3
	1593	B3	
1594	B3		
Potential Loss for re-landscaping	Trees possibly within proposed landscape area	1067	B1
		1068	B1
		1081	B2
		1082	B2
		1083	B2
		1084	B2
		1078	B2

Potential Loss for re-modelling of access and car parking	Highway Tree	N/A	C
	Car Park Tree	1050	C

## **5.2 Detailed Impact Assessment**

### **5.2.1 The Aquarena**

The Aquarena paddling pool site is screened from the highway and car park with a narrow belt of young Holm Oak, Corsican Pine and Thorn trees (1576-1594). The young trees are developing well and are a significant feature now to the locality. They have been downgraded from Category A trees because of their relatively small size and graded as B2 because of their group value in a prominent public location.

The group falls within the indicative entrance to the building and the retention of even some individuals would not be practical and fit into the proposed new layout and landscaping.

The one mature Sycamore (1594) shows good vitality, is large and prominent but has been graded as a B3 tree because of its slightly impaired condition showing some dieback at the top of the crown consistent with its exposed position and previous storm damage. It is a surviving tree from the previous groups which surrounded Beach House.

The existing landscape mound at the front of the Aquarena has the form of a rockery but has long since lost its landscape quality. The three trees present (1573 - 1575) on the top have probably been self set from seed and although now developing into significant small trees are growing too closely to the adjacent wall and would have to be removed in any case to prevent damage.

### **5.2.2 Beach House Grounds**

The trees within Beach House Grounds are not directly affected by the construction and their retention will depend upon agreed landscape proposals to provide an appropriate setting for the innovative fluid form of the building and associated paths and connections with the landscape.

The linear blocks of screening trees along the existing Peters Pans Playground would not be appropriate to these and the relatively small size of the trees would make their replacement with semi-mature specimens in a more sympathetic layout relatively easy. They have however been assigned B2 status because of their prominence and group value and some groups at the western end could well be retained where they fit in the design.

The larger mature Sycamores (09450, 1081, 1068, and 1067) again will have to be considered on their merits to the design but they are in a reasonable condition for their exposed location and with appropriate pruning could make

a significant contribution to amenity as mature features for over 20 years. They must also have additional historical value as survivors of previous gales which devastated the mature treed parkland setting of Beach House. The tree groups to the east and west of Beach House make a significant and maturing contribution to both the park and the setting of the Listed building, Beach House. They appear to be outside the direct impact of the proposals and are generally in a young mature stage of their life with a long safe, useful life expectancy. It would appear that they are of a similar age and planted to replace losses in the Great Storm of 1987.

#### **6. Future tree planting.**

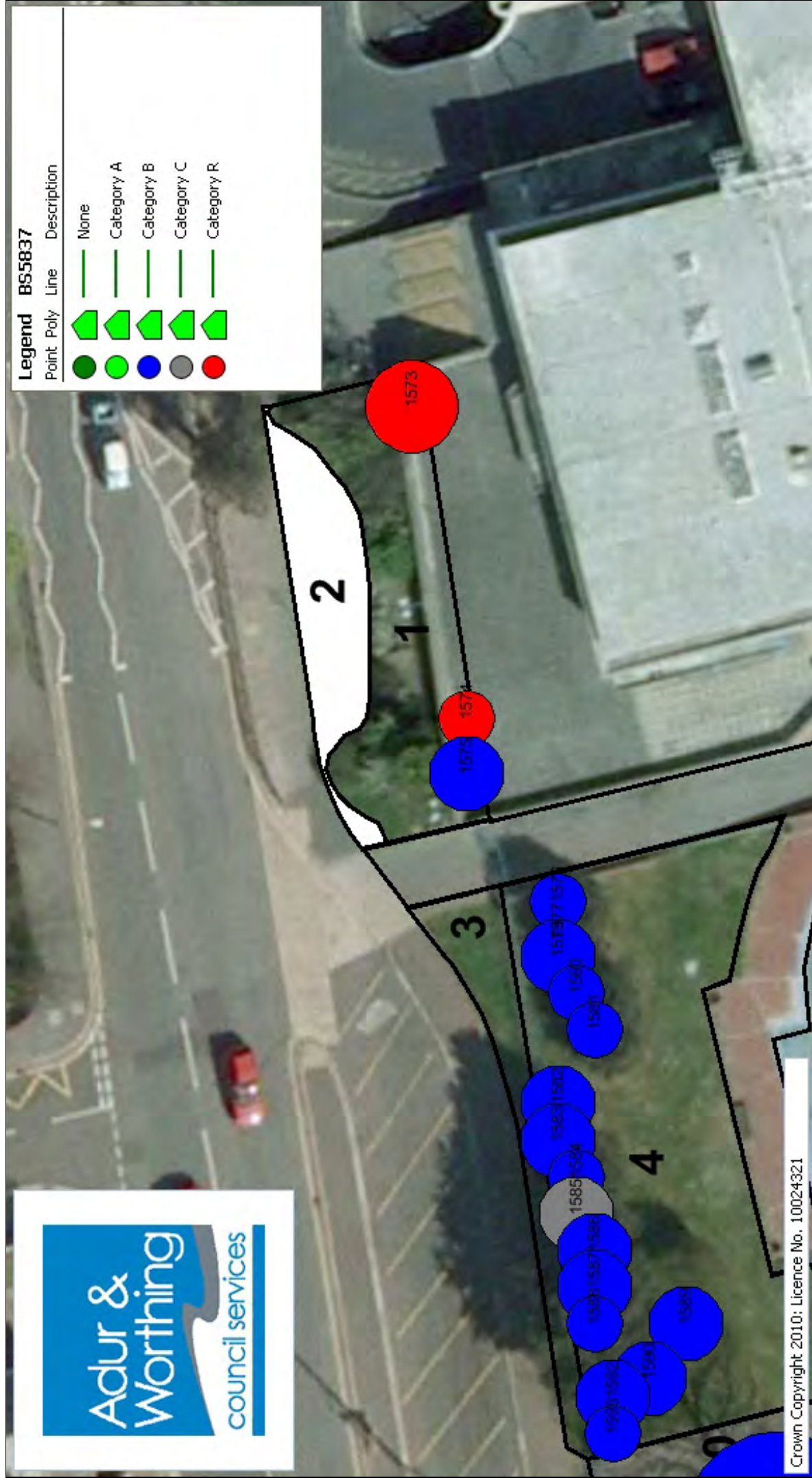
Replacement and new landscape planting will have to take account of the difficulty in establishing trees in this exposed maritime location; the species palette will therefore be limited to those tolerant species such as are found existing in the locality. The site also has significant cultural and historical value as the setting for the Listed Building and the existing young and developing young maturing tree groups were planted as part of landscape restoration works after the Great Storms of 1987 and 1990.

#### **7. Root Protection.**

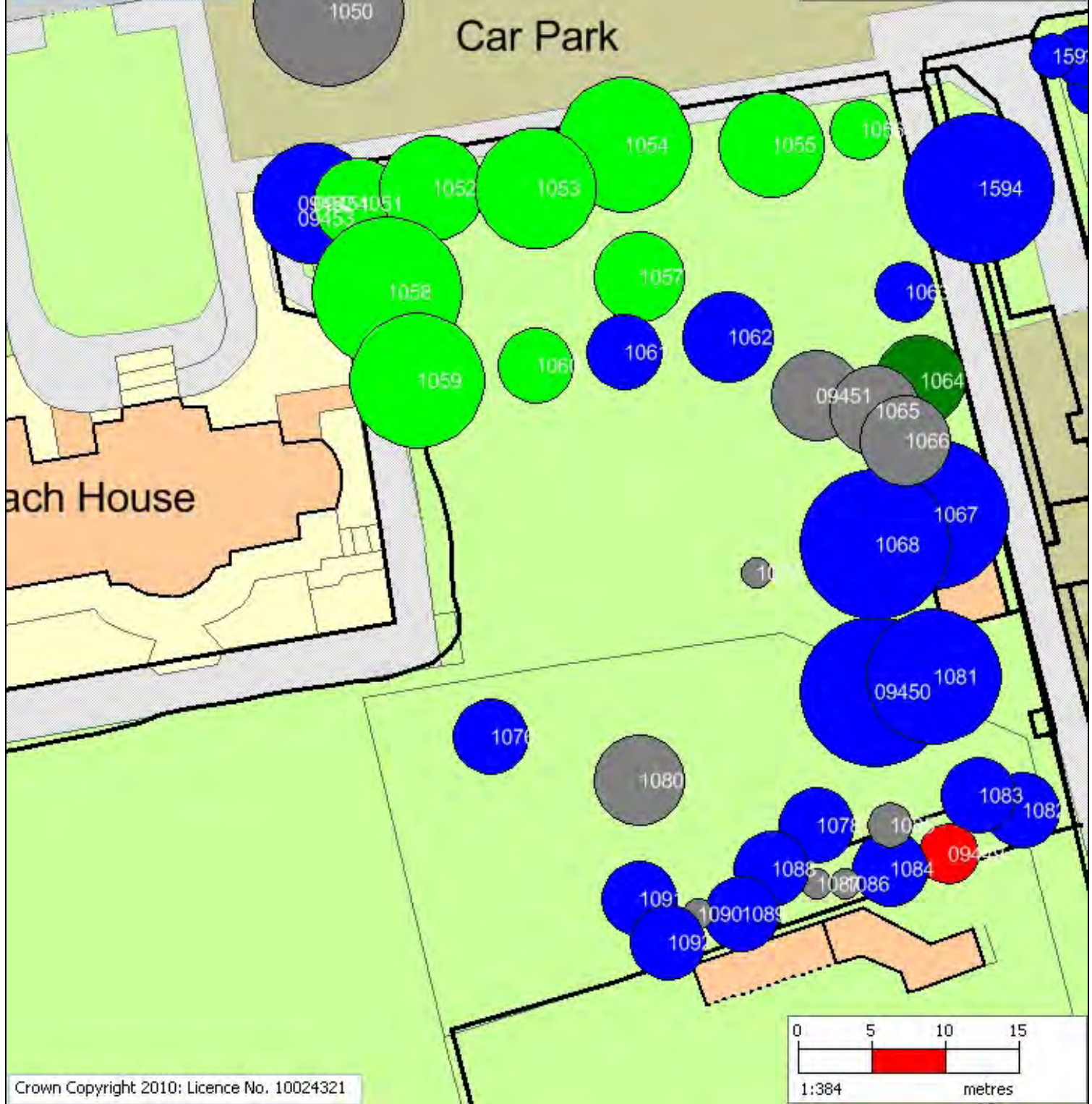
The root protection areas of retained trees will need to be considered in relation to new surfacing, pathway construction and landscaping, method statements, design details and site supervision will need to be agreed in due course.

**Legend BS5837**

Point	Poly	Line	Description
			None
			Category A
			Category B
			Category C
			Category R

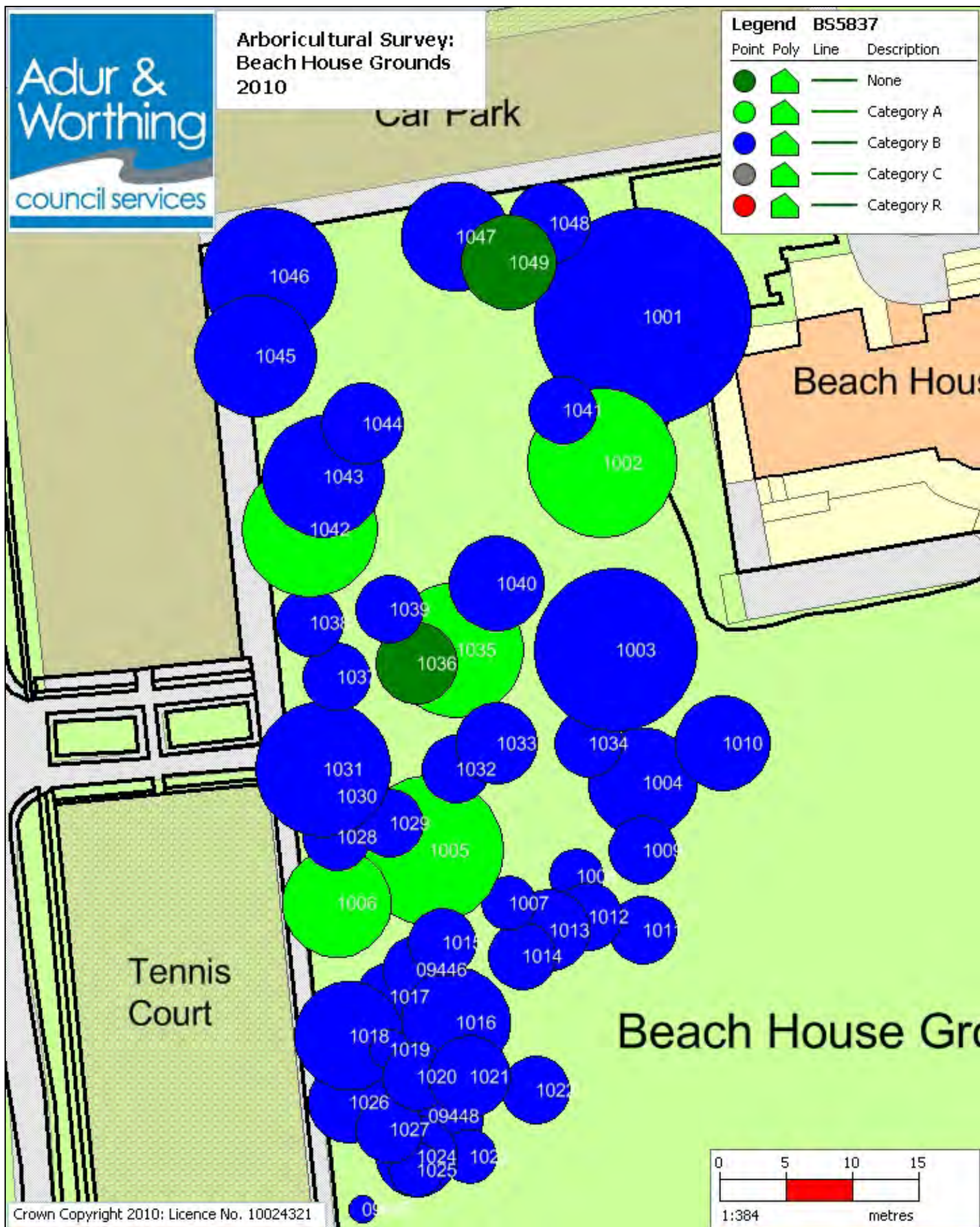


Point	Poly	Line	Description
			None
			Category A
			Category B
			Category C
			Category R





Point	Poly	Line	Description
●	▲	—	None
●	▲	—	Category A
●	▲	—	Category B
●	▲	—	Category C
●	▲	—	Category R



## PARKS TREE SURVEY: DEVELOPMENT

Ward:		Central										Inspection Count: 107	
Park:		AQUARENA										Inspection Count: 20	
Tree No.	Species	DBH (mm)	Height (M)	Spread (M)	Size	Inspected by	Inspected on	Condition	Comments				
1573	Acer pseudoplatanus	350-600	7.0	5	Small	Peter Whish	26/05/2010	Good	Category R				
1574	Prunus avium	350-600	5.0	3	Small	Peter Whish	26/05/2010	Average	Category R				
1575	Prunus avium	350-600	5.0	4	Small	Peter Whish	26/05/2010	Average	Category B3				
1576	Quercus ilex	350-600	3.0	3	Small	Peter Whish	26/05/2010	Good	Category B3				
1577	Quercus ilex	350-600	3.0	1	Small	Peter Whish	26/05/2010	Good	Category B3				
1579	Pinus nigra	600-900	5.0	4	Small	Peter Whish	26/05/2010	Good	Category B3				
1580	Quercus ilex	350-600	4.0	3	Small	Peter Whish	26/05/2010	Good	Category B3				
1581	Quercus ilex	350-600	4.0	3	Small	Peter Whish	26/05/2010	Good	Category B3				
1582	Pinus nigra	350-600	5.0	4	Small	Peter Whish	26/05/2010	Good	Category B3				
1583	Pinus nigra	350-600	5.0	4	Small	Peter Whish	26/05/2010	Good	Category B3				
1584	Quercus ilex	350-600	4.0	3	Small	Peter Whish	26/05/2010	Good	Category B3				
1585	Pinus nigra	350-600	5.0	4	Small	Peter Whish	26/05/2010	Good	Category B3				
1586	Quercus ilex	350-600	5.0	4	Small	Peter Whish	26/05/2010	Good	Category B3				

1587	Quercus ilex	350-600	4.0	4	Small	Peter Whish	26/05/2010	Good	Category B3
1588	Pinus nigra	350-600	4.0	3	Small	Peter Whish	26/05/2010	Good	Category B3
1589	Crataegus laevigata	350-600	4.0	4	Small	Peter Whish	26/05/2010	Good	Category B3
1590	Crataegus laevigata	350-600	4.0	4	Small	Peter Whish	26/05/2010	Good	Category B3
1592	Pinus nigra	350-600	5.0	4	Small	Peter Whish	26/05/2010	Good	Category B3
1593	Acer pseudoplatanus	350-600	4.0	3	Small	Peter Whish	26/05/2010	Good	Category B3
1594	Acer pseudoplatanus	1200-1500	12.0	10	Large	Peter Whish	24/05/2010	Good	Category B3, B1

Park: BEACH HOUSE GROUNDS										Inspection Count: 87	
Tree No.	Species	DBH (mm)	Height (M)	Spread (M)	Size	Inspected by	Inspected on	Condition	Comments		
09446	Acer pseudoplatanus	600-900	6.0	5	Small	Peter Whish	19/05/2010	Good	Category B2		
09447	Acer pseudoplatanus	350-600	3.0	2	Small	Peter Whish	24/05/2010	Average	Category B2		
09448	Acer pseudoplatanus	350-600	7.0	8	Small	Peter Whish	24/05/2010	Good	Category B2		
09449	Quercus ilex	350-600	5.0	4	Small	Peter Whish	24/05/2010	Poor	Category R		
09450	Acer pseudoplatanus	1200-1500	11.0	10	Large	Peter Whish	24/05/2010	Poor	Category C		
09451	Fraxinus excelsior	600-900	0.5	0	Small	Peter Whish	24/05/2010	Good	Category C2		
09452	Acer pseudoplatanus	600-900	8.0	5	Small	Peter Whish	24/05/2010	Good	Category B2		
09453	Acer pseudoplatanus	600-900	8.0	5	Small	Peter Whish	24/05/2010	Good	Category B2		
09454	Acer pseudoplatanus	600-900	8.0	8	Medium	Peter Whish	24/05/2010	Good	Category B2		

1001	Acer pseudoplatanus	1500+	13.0	16	Large	Peter Whish	17/05/2010	Good	Category B1
1002	Acer pseudoplatanus	600-900	70.0	11	Large	Peter Whish	17/05/2010	Good	Category A2
1003	Quercus ilex	1500+	10.0	12	Large	Peter Whish	17/05/2010	Average	Category B3
1004	Tilia x europaea	1200-1500	10.0	8	Large	Peter Whish	17/05/2010	Good	Category B2
1005	Acer pseudoplatanus	1200-1500	12.0	11	Large	Peter Whish	19/05/2010	Good	Category A2
1006	Aesculus hippocastanum	1200-1500	10.0	8	Large	Peter Whish	19/05/2010	Good	Category A3
1007	Quercus ilex	600-900	6.0	4	Small	Peter Whish	19/05/2010	Average	Category B1
1008	Acer pseudoplatanus	350-600	7.0	4	Small	Peter Whish	19/05/2010	Good	Category B1
1009	Acer pseudoplatanus	350-600	7.0	5	Small	Peter Whish	19/05/2010	Good	Category B1
1010	Acer platanoides	900-1200	8.0	7	Medium	Peter Whish	17/05/2010	Good	Category B1
1011	Acer pseudoplatanus	350-600	7.0	5	Small	Peter Whish	19/05/2010	Good	Category B1
1012	Acer pseudoplatanus	350-600	6.0	5	Small	Peter Whish	19/05/2010	Good	Category B1
1014	Quercus ilex	350-600	5.0	5	Small	Peter Whish	19/05/2010	Good	Category B1
1015	Populus x canescens	600-900	8.0	5	Small	Peter Whish	19/05/2010	Good	Category B1
1016	Quercus ilex	600-900	7.0	8	Small	Peter Whish	19/05/2010	Good	Category B1
1017	Acer pseudoplatanus	600-900	6.0	5	Small	Peter Whish	19/05/2010	Good	Category B1
1018	Acer pseudoplatanus	900-1200	8.0	8	Medium	Peter Whish	19/05/2010	Good	Category B1
1019	Acer pseudoplatanus	350-600	6.0	3	Small	Peter Whish	19/05/2010	Good	Category B1
1020	Pinus nigra	600-900	7.0	5		Peter Whish	19/05/2010	Good	Category B1

1021	Acer pseudoplatanus	600-900	10.0	6	Medium	Peter Whish	19/05/2010	Good	Category B1
1022	Quercus ilex	350-600	3.0	5	Small	Peter Whish	24/05/2010	Good	Category B1
1023	Quercus ilex	350-600	3.0	4	Small	Peter Whish	24/05/2010	Average	Category B1
1025	Quercus ilex	350-600	3.0	4	Small	Peter Whish	24/05/2010	Good	Category B1
1026	Pinus nigra	600-900	7.0	6	Small	Peter Whish	19/05/2010	Good	Category B1
1027	Pinus nigra	600-900	7.0	5	Small	Peter Whish	19/05/2010	Good	Category B1
1028	Pinus nigra	600-900	7.0	5	Medium	Peter Whish	17/05/2010	Good	Category B1
1029	Pinus nigra	600-900	8.0	5	Medium	Peter Whish	17/05/2010	Good	Category B1
1030	Pinus nigra	600-900	8.0	5	Medium	Peter Whish	17/05/2010	Good	Category B1
1031	Quercus ilex	1500+	12.0	10	Large	Peter Whish	19/05/2010	Reasonable-needs monitoring	Category B3
1032	Pinus nigra	350-600	7.0	5	Medium	Peter Whish	17/05/2010	Good	Category B1
1033	Pinus nigra	350-600	8.0	6	Small	Peter Whish	17/05/2010	Good	Category B1
1034	Fraxinus excelsior	350-600	6.0	5	Small	Peter Whish	17/05/2010	Good	Category B1
1035	Acer pseudoplatanus	900-1200	10.0	10	Medium	Peter Whish	17/05/2010	Excellent	Category A2
1037	Acer pseudoplatanus	350-600	7.0	5	Small	Peter Whish	17/05/2010	Good	Category B1
1038	Acer pseudoplatanus	350-600	8.0	5	Small	Peter Whish	17/05/2010	Good	Category B1
1039	Fraxinus excelsior	350-600	7.0	5	Small	Peter Whish	17/05/2010	Good	Category B1
1040	Acer pseudoplatanus	350-600	7.0	7	Medium	Peter Whish	17/05/2010	Average	Category B3
1041	Quercus ilex	350-600	6.0	5	Small	Peter Whish	17/05/2010	Good	Category B1
1042	Acer pseudoplatanus	900-1200	11.0	10	Medium	Peter Whish	17/05/2010	Good	Category A3

1043	Fraxinus excelsior	350-600	8.0	9	Medium	Peter Whish	17/05/2010	Good	Category B1
1044	Acer pseudoplatanus	350-600	7.0	6	Small	Peter Whish	17/05/2010	Good	Category B2
1045	Acer pseudoplatanus	900-1200	11.0	9	Medium	Peter Whish	17/05/2010	Average	Category B2
1046	Acer pseudoplatanus	1500+	12.0	10	Large	Peter Whish	17/05/2010	Average	Category B2
1048	Fraxinus excelsior	600-900	10.0	6	Medium	Peter Whish	17/05/2010	Good	Category B2
1050	Quercus ilex	1500+	10.0	10	Medium	Peter Whish	24/05/2010	Reasonable-needs monitoring	Category C1
1051	Fraxinus excelsior	900-1200	9.0	6	Medium	Peter Whish	24/05/2010	Good	Category A2
1052	Fraxinus excelsior	900-1200	10.0	7	Medium	Peter Whish	24/05/2010	Good	Category A2
1053	Fraxinus excelsior	900-1200	9.0	8	Medium	Peter Whish	24/05/2010	Good	Category A2
1054	Acer pseudoplatanus	900-1200	10.0	9	Medium	Peter Whish	24/05/2010	Good	Category A2
1055	Acer pseudoplatanus	900-1200	8.0	7	Medium	Peter Whish	24/05/2010	Good	Category A2
1056	Acer pseudoplatanus	350-600	7.0	4	Small	Peter Whish	24/05/2010	Good	Category A2
1057	Fraxinus excelsior	600-900	6.0	6	Medium	Peter Whish	24/05/2010	Average	Category A2
1058	Acer pseudoplatanus	900-1200	10.0	10	Medium	Peter Whish	24/05/2010	Good	Category A2
1059	Acer pseudoplatanus	900-1200	10.0	9	Medium	Peter Whish	24/05/2010	Good	Category A2
1060	Acer pseudoplatanus	600-900	8.0	5	Medium	Peter Whish	24/05/2010	Good	Category A2
1061	Acer pseudoplatanus	600-900	8.0	5	Medium	Peter Whish	24/05/2010	Good	Category B2

1062	Acer pseudoplatanus		4.0						Peter Whish	24/05/2010	Average	Category B2
1063	Acer pseudoplatanus	350-600	6.0	4	Small			Peter Whish	Peter Whish	24/05/2010	Good	Category B2
1065	Sorbus aria		1.0					Peter Whish	Peter Whish	24/05/2010	Good	Category C
1066	Sorbus aria		1.0		Small			Peter Whish	Peter Whish	24/05/2010	Good	Category C
1067	Acer pseudoplatanus	1200-1500	11.0	10	Large			Peter Whish	Peter Whish	24/05/2010	Good	Category B1
1068	Acer pseudoplatanus	1200-1500	11.0	10	Large			Peter Whish	Peter Whish	24/05/2010	Reasonable-needs monitoring	Category B1
1070	Pinus nigra		2.0	2	Small			Peter Whish	Peter Whish	24/05/2010	Average	Category C
1076	Acer pseudoplatanus	600-900	8.0	5	Medium			Peter Whish	Peter Whish	24/05/2010	Good	Category B1
1078	Populus x canescens	600-900	77.0	5	Small			Peter Whish	Peter Whish	24/05/2010	Good	Category B2
1080	Acer pseudoplatanus	600-900	10.0	6	Large			Peter Whish	Peter Whish	24/05/2010	Poor	Category C
1081	Quercus ilex	900-1200	6.0	9	Medium			Peter Whish	Peter Whish	24/05/2010	Average	Category B2
1082	Pinus nigra	600-900	7.0	5	Medium			Peter Whish	Peter Whish	24/05/2010	Good	Category B2
1083	Quercus ilex	350-600	6.0	5	Small			Peter Whish	Peter Whish	24/05/2010	Good	Category B2
1084	Quercus ilex	350-600	6.0	5	Small			Peter Whish	Peter Whish	24/05/2010	Good	Category B2
1085	Quercus ilex	350-600	2.0	3	Small			Peter Whish	Peter Whish	24/05/2010	Average	Category C
1086	Quercus ilex	350-600	3.0	2	Small			Peter Whish	Peter Whish	24/05/2010	Average	Category C
1087	Quercus ilex	350-600	2.0	2				Peter Whish	Peter Whish	24/05/2010	Poor	Category C
1088	Quercus ilex	350-600	5.0	5	Small			Peter Whish	Peter Whish	24/05/2010	Good	Category B2
1089	Quercus ilex	350-600	5.0	5	Small			Peter Whish	Peter Whish	24/05/2010	Good	Category B2
1090	Quercus ilex	350-600	2.0	2	Small			Peter Whish	Peter Whish	24/05/2010	Poor	Category C
1091	Quercus ilex	350-600	4.0	5	Small			Peter Whish	Peter Whish	24/05/2010	Good	Category B2

1092	Pinus nigra	350-600	7.0	5	Small	Peter Whish	24/05/2010	Good	Category B2
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