



ARBORICULTURAL  
CONSULTANTS & CONTRACTORS

ADDITIONAL DRAWINGS

## Tree Survey

At

The Custom House  
Penarth

THE VALE OF  
GLAMORGAN COUNCIL  
(PLANNING DIVISION)

**RE-REGISTERED**

HEAD OF PLANNING AND TRANSPORTATION

RECEIVED

20 DEC 2011

ENVIRONMENTAL  
AND ECONOMIC  
REGISTRATION

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*27 October 2011*

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I have been instructed by Mr Nigel Arnold of Nigel Arnold Architects to carry out a survey on trees at The Custom House, Penarth

### **Scope of Report**

This Tree Survey has been undertaken within the recommendations of British Standards 5837:2005 and current good arboricultural practice.

The survey entailed a visual inspection from ground level of all trees.

Each tree has been numbered and, where instructed, for future identification on site, have been tagged using small durable metal or plastic tags.

Due to variations of existing ground levels through the site, height dimensions are estimated and are given in metres. Accurate heights, measured with the aid of optical instruments can be provided where instructed.

Trunk/stem diameters are measured at 1.5 metres above ground level, or immediately above the root flare for multi-stemmed trees.

Estimate branch spread is taken in metres from the centre of the trunk, at the four cardinal points of a compass, to achieve an accurate representation of crown shape.

An assessment of a tree's age classification is made in terms of its maturity within the site's landscape.

An assessment of a tree's physiological condition is to be made as good, fair, poor, dead.

Data on the structural condition of the tree should be entered, e.g., collapsing, leaning and the presence of any decay or physical defect should be noted.

Preliminary management recommendations include further investigation of suspected defects that require more detailed assessment and potential for wildlife habitat.

An assessment of a tree's future life expectancy is made as <10, 10-20, 20-40 or >40 etc.

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Categorisation of Trees – Table 1

The category for each tree is assessed using the recommendations of BS5837:2005.

Table 1 — Cascade chart for tree quality assessment.

TREES FOR REMOVAL		Criteria			Identification on plan
Category and definition.	Criteria	1 Mainly arboricultural values	2 Mainly landscape values	3 Mainly cultural values, including conservation	
<p><b>Category R</b> Those in such a condition that any existing value would be lost within 10 years and which should, in the current context, be removed for reasons of sound arboricultural management</p>	<ul style="list-style-type: none"> <li>Trees that have a serious, irremediable, structural defect, such that their early loss is expected due to collapse, including those that will become unviable after removal of other R category trees (i.e. where, for whatever reason, the loss of companion shelter cannot be mitigated by pruning)</li> <li>Trees that are dead or are showing signs of significant, immediate, and irreversible overall decline</li> <li>Trees infected with pathogens of significance to the health and/or safety of other trees nearby (e.g. Dutch elm disease), or very low quality trees suppressing adjacent trees of better quality</li> </ul> <p>NOTE: Habitat reinstatement may be appropriate (e.g. R category tree used as a bat roost; installation of bat box in nearby tree).</p>				DARK RED
<b>TREES TO BE CONSIDERED FOR RETENTION</b>					
Category and definition	Criteria — Subcategories	1 Mainly arboricultural values	2 Mainly landscape values	3 Mainly cultural values, including conservation	Identification on plan
<p><b>Category A</b> Those of high quality and value: in such a condition as to be able to make a substantial contribution (a minimum of 40 years is suggested)</p>		Trees that are particularly good examples of their species, especially if rare or unusual, or essential components of groups, or of formal or semi-formal arboricultural features (e.g. the dominant and/or principal trees within an avenue)	Trees, groups or woodlands which provide a definite screening or softening effect to the locality in relation to views into or out of the site, or those of particular visual importance (e.g. avenues or other arboricultural features assessed as groups)	Trees, groups or woodlands of significant conservation, historical, commemorative or other value (e.g. veteran trees or wood-pasture)	LIGHT GREEN
<p><b>Category B</b> Those of moderate quality and value: those in such a condition as to make a significant contribution (a minimum of 20 years is suggested)</p>		Trees that might be included in the high category, but are downgraded because of impaired condition (e.g. presence of remediable defects including unsympathetic past management and minor storm damage)	Trees present in numbers, usually as groups or woodlands, such that they form distinct landscape features, thereby attracting a higher collective rating than they might as individuals but which are not, individually, essential components of formal or semi-formal arboricultural features (e.g. trees of moderate quality within an avenue that includes better, A category specimens), or trees situated mainly internally to the site, therefore individually having little visual impact on the wider locality	Trees with clearly identifiable conservation or other cultural benefits	MID BLUE
<p><b>Category C</b> Those of low quality and value: currently in adequate condition to remain until new planting could be established (a minimum of 10 years is suggested), or young trees with a stem diameter below 150 mm</p>		Trees not qualifying in higher categories	Trees present in groups or woodlands, but without this conferring on them significantly greater landscape value, and/or trees offering low or only temporary screening benefit	Trees with very limited conservation or other cultural benefits	GREY
<p>NOTE: Whilst C category trees will usually not be retained where they would impose a significant constraint on development, young trees with a stem diameter of less than 150 mm should be considered for relocation.</p>					



<b>T1</b>	<b>Sycamore (Acer pseudoplatanus)</b>
<b>Height</b>	17m
<b>Single/Multi stemmed</b>	Single stem
<b>Stem Diameter</b>	0.44m
<b>Branch Spread</b>	N – 4m E – 3m S – 2m W – 4m
<b>Height of Crown</b>	3m
<b>Age</b>	Middle aged
<b>Physiological Condition</b>	Fair to poor
<b>Structural Condition</b>	Tree of variable form. Main stem divides at 3m leading to twin stem mid crown. Evidence of minor squirrel damage and associated deadwood throughout crown.
<b>Prel. Man. Recommendations</b>	Prune to remove major deadwood and damaged branches. Monitor for health
<b>Est. Remaining Contribution Category</b>	20-40 C2

<b>T2</b>	<b>Sycamore (Acer pseudoplatanus)</b>
<b>Height</b>	18m
<b>Single/Multi stemmed</b>	Multi stemmed
<b>Stem Diameter</b>	0.6m
<b>Branch Spread</b>	N – 4m E – 6m S – 7m W – 6m
<b>Height of Crown</b>	1m
<b>Age</b>	Middle aged
<b>Physiological Condition</b>	Fair to poor
<b>Structural Condition</b>	Multi stemmed specimen of variable form with evidence of tight forks and inclusions at base. Extensive ivy growth on main stems prevents full inspection.
<b>Prel. Man. Recommendations</b>	No action required at this time. Monitor basal forks for safety.
<b>Est. Remaining Contribution Category</b>	20-40 C2

<b>T3</b>	<b>Sycamore (Acer pseudoplatanus)</b>
<b>Height</b>	16m
<b>Single/Multi stemmed</b>	Single stem
<b>Stem Diameter</b>	0.41m
<b>Branch Spread</b>	N – 4m E – 4m S – 5m W – 3m
<b>Height of Crown</b>	8m
<b>Age</b>	Middle aged
<b>Physiological Condition</b>	Fair to poor
<b>Structural Condition</b>	Tree of reasonable form with extensive epicormic shoots at base that prevent full inspection. This specimen has grown into adjacent iron railing fence which may have led to structural deformities within main stem.
<b>Prel. Man. Recommendations</b>	Monitor for health
<b>Est. Remaining Contribution</b>	10-20
<b>Category</b>	C2

<b>G4</b>	<b>Group of Sycamore (Acer pseudoplatanus)</b>
<b>Height</b>	11m
<b>Single/Multi stemmed</b>	Single and multi stemmed
<b>Stem Diameter</b>	Up to 0.3m
<b>Branch Spread</b>	N – 2m E – 2m S – 0m W – 1m
<b>Height of Crown</b>	1m
<b>Age</b>	Young
<b>Physiological Condition</b>	Poor
<b>Structural Condition</b>	Trees of poor form sited on steep slope. These specimens may become unstable at a later date.
<b>Prel. Man. Recommendations</b>	Remove
<b>Est. Remaining Contribution</b>	<10
<b>Category</b>	R

<b>T5</b>	<b>Sycamore (<i>Acer pseudoplatanus</i>)</b>
<b>Height</b>	17m
<b>Single/Multi stemmed</b>	Multi stemmed
<b>Stem Diameter</b>	0.45m
<b>Branch Spread</b>	N – 4m E – 5m S – 2m W – 1m
<b>Height of Crown</b>	0m
<b>Age</b>	Middle aged
<b>Physiological Condition</b>	Fair to poor
<b>Structural Condition</b>	Tree of poor form with minor stem extending from base on the western side. Secondary branch extends on the eastern side at approximately 3m which also exhibits signs of decay at approximately 9m
<b>Prel. Man. Recommendations</b>	Remove damaged branch on eastern side. Monitor for health
<b>Est. Remaining Contribution</b>	10-20
<b>Category</b>	C

<b>T6</b>	<b>Ash (<i>Fraxinus excelsior</i>)</b>
<b>Height</b>	13m
<b>Single/Multi stemmed</b>	Single stem
<b>Stem Diameter</b>	0.21m
<b>Branch Spread</b>	N – 0m E – 8m S – 0m W – 0m
<b>Height of Crown</b>	10m
<b>Age</b>	Middle aged
<b>Physiological Condition</b>	Poor
<b>Structural Condition</b>	Tree of poor form with notable twists within main stem. This specimen may become unstable
<b>Prel. Man. Recommendations</b>	Remove
<b>Est. Remaining Contribution</b>	<10
<b>Category</b>	R

<b>T7</b>	<b>Sycamore (Acer pseudoplatanus)</b>
<b>Height</b>	17m
<b>Single/Multi stemmed</b>	Single stem
<b>Stem Diameter</b>	0.47m
<b>Branch Spread</b>	N – 5m E – 7m S – 3m W – 1m
<b>Height of Crown</b>	4m
<b>Age</b>	Middle aged
<b>Physiological Condition</b>	Fair
<b>Structural Condition</b>	Tree of reasonable form with crown more heavily developed on eastern side. Main stem heavily colonised by ivy thus preventing full inspection
<b>Prel. Man. Recommendations</b>	Sever ivy at base. Monitor for stability
<b>Est. Remaining Contribution</b>	>40
<b>Category</b>	B2

<b>T8</b>	<b>Sycamore (Acer pseudoplatanus)</b>
<b>Height</b>	16m
<b>Single/Multi stemmed</b>	Single stem
<b>Stem Diameter</b>	0.35m
<b>Branch Spread</b>	N – 3m E – 4m S – 4m W – 3m
<b>Height of Crown</b>	8m
<b>Age</b>	Middle aged
<b>Physiological Condition</b>	Poor
<b>Structural Condition</b>	Tree of reasonable form with extensive decay within main stem at approximately 1m. This specimen is at risk of failure
<b>Prel. Man. Recommendations</b>	Remove
<b>Est. Remaining Contribution</b>	<10
<b>Category</b>	R

<b>T9</b>	<b>Ash (<i>Fraxinus excelsior</i>)</b>
<b>Height</b>	18m
<b>Single/Multi stemmed</b>	Single stem
<b>Stem Diameter</b>	0.44m
<b>Branch Spread</b>	N – 8m E – 8m S – 3m W – 2m
<b>Height of Crown</b>	10m
<b>Age</b>	Middle aged
<b>Physiological Condition</b>	Fair to poor
<b>Structural Condition</b>	Tree of poor form with crown heavily developed on northern side. This specimen leans extensively to the north. Main stem heavily colonised by ivy thus preventing full inspection.
<b>Prel. Man. Recommendations</b>	Undertake 7m crown reduction to reduce risk of failure. Monitor for health.
<b>Est. Remaining Contribution Category</b>	20-40 C

<b>T10</b>	<b>Sycamore (<i>Acer pseudoplatanus</i>)</b>
<b>Height</b>	18m
<b>Single/Multi stemmed</b>	Single stem
<b>Stem Diameter</b>	0.51m
<b>Branch Spread</b>	N – 6m E – 6m S – 4m W – 5m
<b>Height of Crown</b>	6m
<b>Age</b>	Middle aged
<b>Physiological Condition</b>	Fair
<b>Structural Condition</b>	Tree of reasonable form with well balanced crown. Main stem heavily colonised by ivy thus preventing full inspection. Evidence of minor deadwood within crown.
<b>Prel. Man. Recommendations</b>	Sever ivy at base. Prune to remove deadwood. Monitor for health.
<b>Est. Remaining Contribution Category</b>	>40 B2



<b>T11</b>	<b>Sycamore (<i>Acer pseudoplatanus</i>)</b>
<b>Height</b>	15m
<b>Single/Multi stemmed</b>	Multi stemmed
<b>Stem Diameter</b>	0.5m
<b>Branch Spread</b>	N – 3m E – 4m S – 3m W – 3m
<b>Height of Crown</b>	0m
<b>Age</b>	Middle aged
<b>Physiological Condition</b>	Poor
<b>Structural Condition</b>	Multi stemmed specimen of poor form with extensive squirrel damage throughout crown. This specimen is unsuitable for retention
<b>Prel. Man. Recommendations</b>	Remove
<b>Est. Remaining Contribution</b>	<10
<b>Category</b>	R
<b>T12</b>	<b>Ash (<i>Fraxinus excelsior</i>)</b>
<b>Height</b>	19m
<b>Single/Multi stemmed</b>	Single stem
<b>Stem Diameter</b>	0.47m
<b>Branch Spread</b>	N – 5m E – 5m S – 8m W – 3m
<b>Height of Crown</b>	6m
<b>Age</b>	Middle aged
<b>Physiological Condition</b>	Fair
<b>Structural Condition</b>	Tree of reasonable form sited at top of steep bank
<b>Prel. Man. Recommendations</b>	No action required at this time
<b>Est. Remaining Contribution</b>	>40
<b>Category</b>	B2

<b>T13</b>	<b>Sycamore (Acer pseudoplatanus)</b>
<b>Height</b>	18m
<b>Single/Multi stemmed</b>	Single stem
<b>Stem Diameter</b>	0.44m
<b>Branch Spread</b>	N – 5m E – 4m S – 5m W – 4m
<b>Height of Crown</b>	2m
<b>Age</b>	Middle aged
<b>Physiological Condition</b>	Fair to poor
<b>Structural Condition</b>	Tree of variable form with some minor squirrel damage within crown. Ivy colonisation of base and main stem prevents full inspection
<b>Prel. Man. Recommendations</b>	No action required at this time. Monitor for health
<b>Est. Remaining Contribution</b>	20-40
<b>Category</b>	C2

<b>T14</b>	<b>Sycamore (Acer pseudoplatanus)</b>
<b>Height</b>	15m
<b>Single/Multi stemmed</b>	Multi stemmed
<b>Stem Diameter</b>	0.5m
<b>Branch Spread</b>	N – 3m E – 2m S – 4m W – 5m
<b>Height of Crown</b>	3m
<b>Age</b>	Middle aged
<b>Physiological Condition</b>	Fair to poor
<b>Structural Condition</b>	Tree of variable form. Main stem divides at 0.5m leading to multi stemmed mid crown. Evidence of severe inclusions within these basal forks. Extensive ivy colonisation prevents inspection on base at main stem. Evidence of severe squirrel damage throughout crown.
<b>Prel. Man. Recommendations</b>	Undertake 5m crown reduction. Sever ivy at base. Monitor for health
<b>Est. Remaining Contribution</b>	10-20
<b>Category</b>	C

T15	Sycamore ( <i>Acer pseudoplatanus</i> )
Height	16m
Single/Multi stemmed	Multi stemmed
Stem Diameter	0.55m
Branch Spread	N – 5m E – 4m S – 5m W – 5m
Height of Crown	3m
Age	Middle aged
Physiological Condition	Fair to poor
Structural Condition	Multi stemmed specimen of poor form with evidence of squirrel damage throughout mid crown
Prel. Man. Recommendations	Prune to remove damaged and hung up branches. Prune to remove major deadwood. Sever ivy at base. Monitor for health
Est. Remaining Contribution Category	10-20 C

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### **Recommendations for Tree Protection during Development**

Due to the high risk to established trees we would recommend the installation of protective fencing prior to commencement of **any** works on site in accordance with BS 5837:2005 "Trees in relation to Construction". Trees should be protected using scaffold frame supporting weld mesh panel fencing sited on the edge of the Root Protection Area as defined in BS5837:2005. These fenced areas should not be used for the storage of any plant machinery or materials and personnel should be excluded at all times; these fences should remain in situ until after final landscaping has been carried out, removed by hand with great care to prevent compaction or root damage to established trees. The services of a suitably qualified arborist should be sought **prior** to the commencement of each stage.

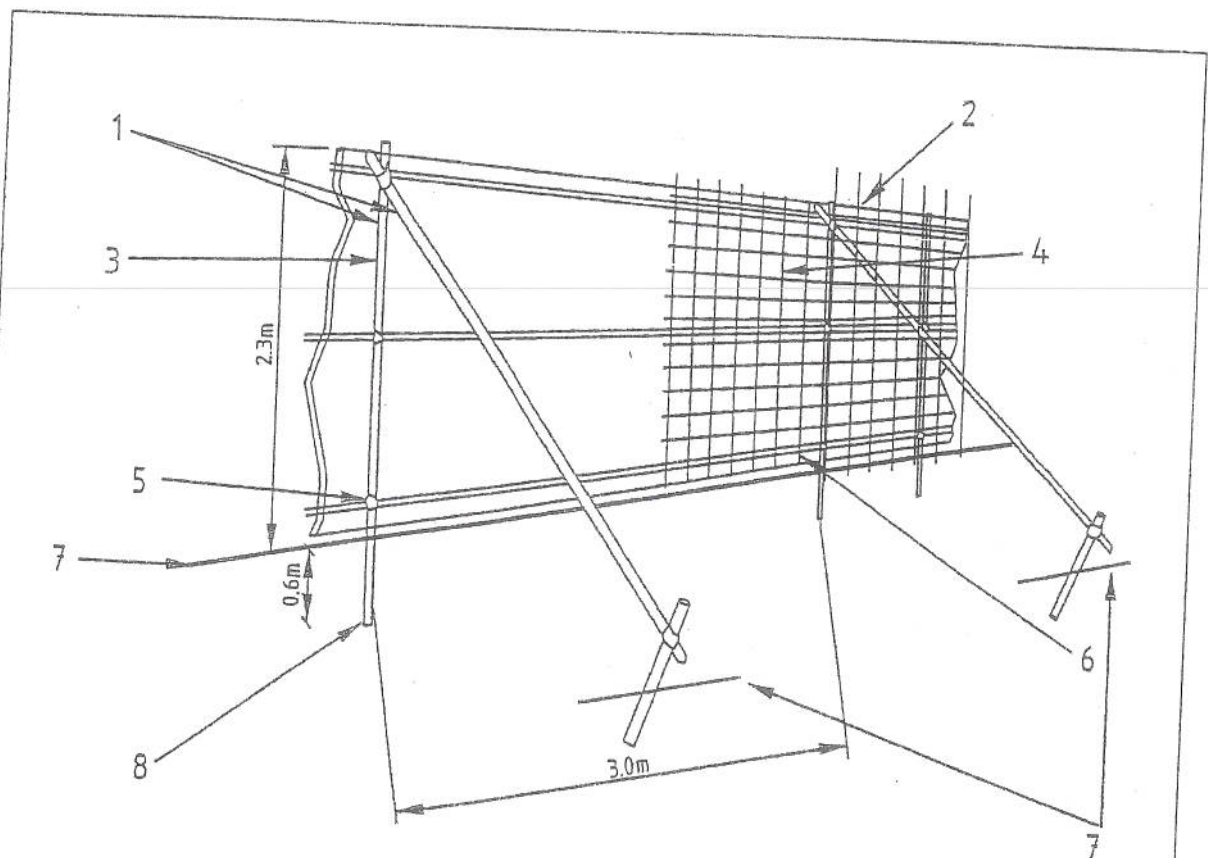
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BS5837:2005 – 'TREES IN RELATION TO CONSTRUCTION –  
RECOMMENDATIONS'

PROTECTIVE BARRIER - DETAIL



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

Figure 2 — Protective barrier