



**TREE SURVEY & CONSTRAINTS PLAN
IN ACCORDANCE WITH BS 5837:2012**

Proj. No 10778	Crooked Billet, Newton Longville, MK17 0DF
Client:	Arc Design Consultants Ltd
Date of Report:	23/02/2024

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TREE SURVEY & CONSTRAINTS PLAN IN ACCORDANCE WITH BS 5837:2012

The Tree Constraints Plan (TCP) is an important tool that objectively evaluates, classifies and categorises trees in accordance with BS 5837 (2012). Simultaneously, it also provides the architect and designer with an assessment of the associated constraints they may create. As such, the data presented is aimed at pre-empting the requirements of the Local Planning Authority (LPA) by identifying and quantifying key constraints such as canopy dimensions, root protection areas (RPA), water demand and ground cover. The TCP also provides an assessment of the general condition of the trees.

The benefit of the TCP is that the developable area that is free from physical tree constraints, both above and below ground, is clearly identified. Ideally, all development should take place outside the canopy spread and RPA of the trees considered worthy or appropriate for retention thus allowing a traditional construction process. It is usually technically possible (though not necessarily desirable) to build within a very limited portion of the RPA of trees using specialist engineering techniques that provide for minimal or no root disturbance, but inevitably this is more difficult and expensive than traditional construction methods and may not be acceptable to the LPA. Similarly, and wherever possible, construction should take place a minimum of 2 metres beyond the maximum branch spread of retained trees to allow workspace for scaffolding etc.

Once the final design is settled it will be necessary to complete an 'Arboricultural Impact Assessment and Preliminary Method Statement' (Prelim TS & AIA) which will form part of the planning application submission. The Prelim TS & AIA will also provide more detailed information regarding tree surgery and pests and diseases etc.

NB: This report is for design guidance only and not sufficient to support a planning application

Contents

- 1.0 Site Drawing**
- 2.0 Schedule of Trees**
- 3.0 Explanatory Notes**
- 4.0 Statutory Tree Protection**

TREE PROTECTION STATUS

Hayden's sourced TPO & Conservation Area status from the Local Planning Authority's Online Mapping System on 15/02/2024.

- We were informed that:
- No TPO's are present on site
 - The site is not located within a conservation area

We would advise it prudent that before any tree work commences, this is checked directly with the Local Planning Authority to confirm that their online mapping system is definitive.

CONSTRAINTS PLAN

The Tree Constraints Plan (TCP) is an important tool that objectively evaluates, classifies and categorises trees in accordance with BS 5837 (2012). Simultaneously, it also provides the architect and designer with an assessment of the associated constraints they may create. As such, the data presented is aimed at pre-empting the requirements of the Local Planning Authority (LPA) by identifying and quantifying key constraints such as canopy dimensions, root protection areas (RPA), water demand and ground cover. The TCP also provides an assessment of the general condition of the trees.

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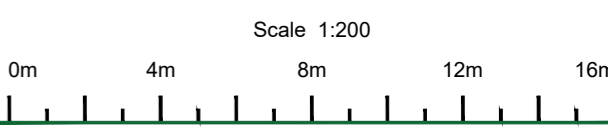
CATEGORY AND DEFINITION

Trees unsuitable for retention	
Category U	Those in such condition that they cannot realistically be retained as living trees in the current land use for longer than 10 years
Trees to be considered for retention	
Category A	Trees of high quality with an estimated remaining life expectancy of at least 40 years
Category B	Trees of moderate quality with an estimated remaining life expectancy of at least 20 years
Category C	Trees of low quality with an estimated remaining life expectancy of at least 10 years, or young trees with a stem diameter below 150mm

Rev:	Date:	By:	Revision:
-	23/02/24	GM	Based on "Crooked Billet - Block Plan.dwg"

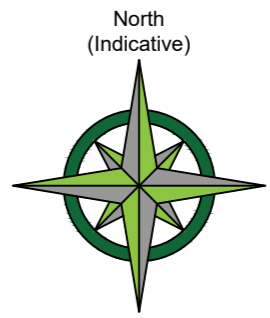
The position, condition, and dimensions of the trees are based on a site survey undertaken on 08/02/24

"The original of this drawing was produced in colour - a monochrome copy should not be relied upon"

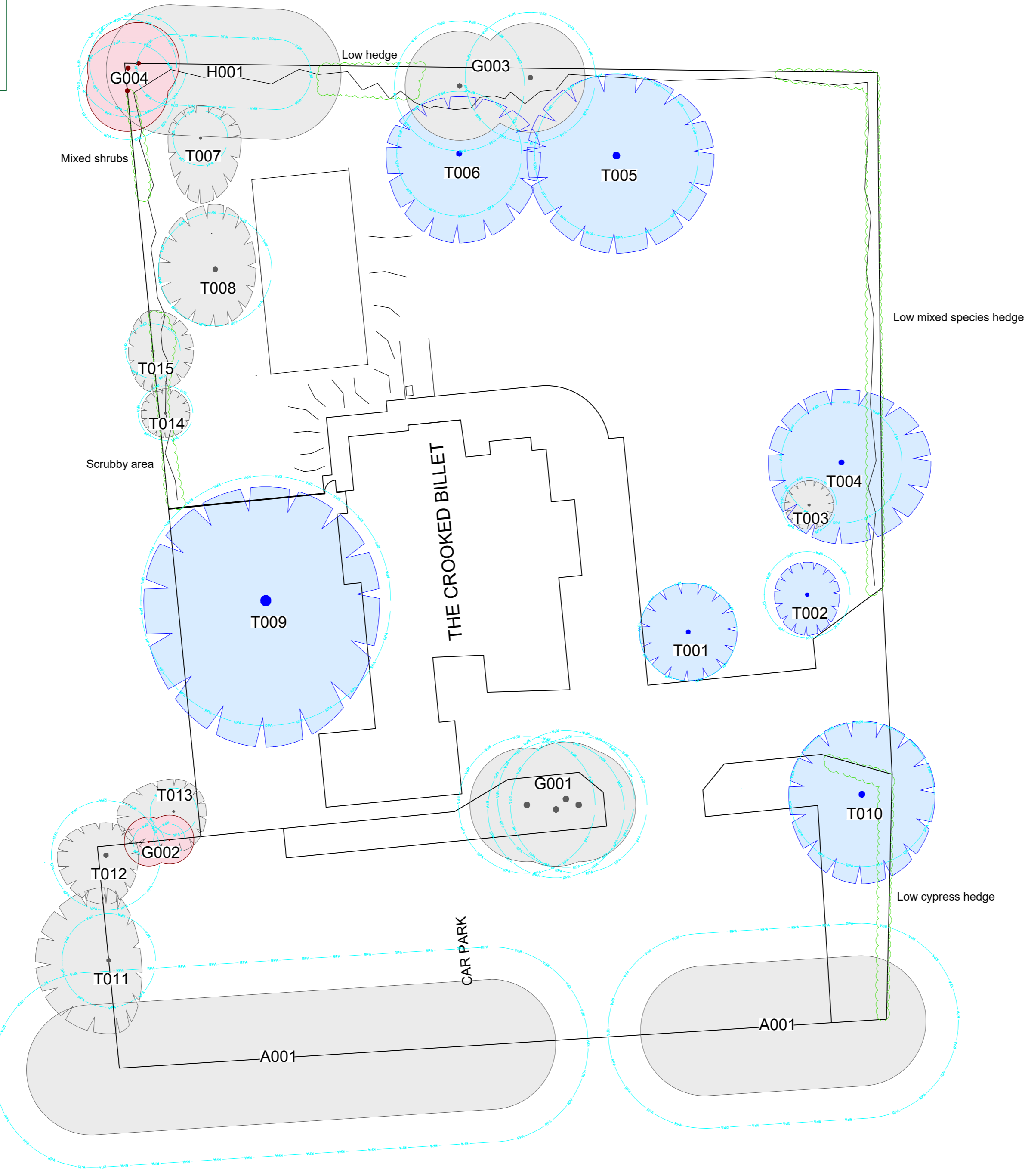


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Client:	Arc Design Consultants Ltd	Drawing Title:	Constraints Plan
Site:	Crooked Billet, Newton Longville, MK17 0DF		
Date:	23/02/24	Drawn By:	GM
Scale:	1:200 (A2)	Checked By:	LA
		Drawing No.:	10778-D-CP
		Rev.:	-



Existing Site Plan



NOTE:
 Hayden's Arboricultural Consultants were provided with a Block Plan which showed the position of the trees within the site. These positions have been used for the locations for the surveyed trees. As such the position of the trees/landscape features should not be taken as exact but gives a fair distribution of their locations on site.

LEGEND

	Existing Tree/Feature BS 5837:2012 Category B
	Existing Tree/Feature BS 5837:2012 Category C
	Existing Tree/Feature BS 5837:2012 Category U
	Line of Root Protection Area (RPA) - calculated following guidelines set in BS 5837:2012
	Additional feature which doesn't meet BS 5837:2012 categorisation but is included for reference

TreeNo	Species	DBH	Height		Visual	Crown Spread	Problems / Comments	BS Cat	Work Required	Priority
		Min Dist	Crown Base	Lowest Branch	Age	Water Demand				
		RPA (m ²)	Aspect	Aspect	SULE	Ground Cover				
T002	Arizona Cypress	220	6		Moderate	N2, E2, S2.5, W2	A tree with good vitality. Globular shaped crown extends to the ground. Some Ivy in inner crown. Branches fastigate in habit. Good form and condition.	B1	No work required.	4
		2.64	0.1		SM	High				
Yes		21.9			40+ years	Grass				
T003	Golden Lawson Cypress	140	5		Moderate	N1.5, E1.5, S1.5, W1.5	A large shrub/small multi-stemmed tree. Crown is dense and extends down to the ground. Foliage healthy and good colour. Good form and condition.	C1	No work required.	4
		1.68	0.1		SM	High				
Yes		8.9			20+ years	Grass				
T004	Ash	310	10		High	N4.5, E5.5, S5, W4.5	A single stemmed tree by east boundary. A branch has been removed from the stem on the northeast aspect, strong reaction growth is beginning to occlude the wound. The stem divides at approx. 3.5 metres. Crown is balanced and displays good budding material throughout. 4 metre tall floodlight is under crown. 5 metres from stem on western aspect. Fair form, good physiological condition.	B1	No work required.	4
		3.72	2	1.5	EM	Moderate				
Yes		43.5		S	20+ years	Grass, Tarmac				
T005	Cherry Sp	420	7.5		High	N5, E6, S6, W5.5	A multi-stemmed tree divides into four from ground level. No significant defects or fungal fruiting bodies observed. Balanced crown displaying good vigour. Benches lay beneath crown. Small diameter branches have been pruned to lift the crown to approx. 2 metres. Good form and condition.	B1	No work required.	4
		5.04	2		M	Moderate				
Yes		79.8			20+ years	Grass				
T006	Walnut	320	11		Moderate	N3.5, E5, S5.5, W4.5	A single stemmed tree. Upright. No significant defects or fungal fruiting bodies observed. Well shaped crown. Small diameter branches have been pruned to lift the crown to current dimensions. Overhead cables run through the crown from the northwest to the south. Branches have been headed back to provide clearance for the cables, but these have begun to regrow and now touch. Good form and condition.	B1	Prune branches to provide approximately 1 metre clearance from utility cables.	3
		3.84	2	2	SM	Moderate				
Yes		46.3			20+ years	Grass				
T007	Crab Apple - Native	140	4.5		Low	N2, E2.5, S4, W2	A low quality small tree. Stem divides in two at ground level. Both stems lean heavily to the south. Basal suckers present. Asymmetric crown. Some branches have been removed from northern aspect, tree has responded with vegetative upright growth. Poor form. Fair physiological condition.	C1	No work required.	4
		1.68	1.5		EM	Moderate				
Yes		8.9			10+ years	Grass				
T008	Wild Cherry	290	7		Moderate	N4, E2.5, S3.5, W3.5	A single stemmed tree. No significant structural defects or fungal fruiting bodies observed. Three branches have been removed from the stem on the east aspect at approx. 1.8 metres. Reaction wood is just starting to occlude the largest wound but this is absent from the other two. Healthy budding material throughout crown. Fair form and condition.	C1	No work required.	4
		3.48	2	1.5	EM	Moderate				
Yes		38		NE	10+ years	Grass, Bare earth				

TreeNo	Species	DBH	Height		Visual	Crown Spread	Problems / Comments	BS Cat	Work Required	Priority
		Min Dist	Crown Base	Lowest Branch	Age	Water Demand				
		RPA (m²)	Aspect	Aspect	SULE	Ground Cover				
T009	Ash	640	16		Moderate	N7, E7, S9, W7.5	A mature single stemmed tree located in a private fenced area. Building under crown on eastern aspect. Branches historically removed from stem at approx. 3 metres have fully occluded. Lower branches have been headed back, which has likely lifted the crown. Epicormic growth present on these pruned lower branches. Overall the crown is well balanced and displaying good budding material throughout. No significant defects or fungal fruiting bodies observed. Good form and condition.	B1	No work required.	4
		7.68	2	4	M	Moderate				
Yes		185.3			20+ years	Grass, Building				
T010	Deodar Cedar	370	14		High	N4.5, E4.5, S5.5, W4.5	A single stemmed tree by the east boundary. Lower branches have been removed from the stem to a height of 2 metres. A well balanced, pyramidal crown contains healthy foliage. Good form and condition.	B1	No work required.	4
		4.44	1.5		SM	High				
Yes		61.9			20+ years	Grass, Gravel, Tarmac				
T011	Goat Willow	240	7		Low	N4.5,E2, S4.5, W4.5	A low quality coppice tree tight against west boundary fence. Ill suited to location, consider its removal. Fair form and condition.	C1	No work required.	4
		2.88	2		SM	High				
Yes		26.1			10+ years	Gravel, Off-site/no access				
T012	Ash	280	7		Low	N2, E3, S3, W2	A likely self set tree, tight against boundary fence. Reduced back on northern aspect. Ill suited to location, consider its removal.	C1	No work required.	4
		3.36	2.5		SM	Moderate				
Yes		35.5			10+ years	Gravel, Off-site/no access				
T013	Magnolia Sp	120	4.5		Low	N2, E2, S2.5, W3.5	An off-site tree close to boundary fence. Some lower branches which overhang site have been pruned, tree is responding with Epicormic growth. Good budding material throughout crown. Fair form. Good condition.	C1	No work required.	4
		1.44	2		SM	Moderate				
Yes		6.5			10+ years	Grass, Gravel				
T014	Holly	140	5		Moderate	N1.5, E1.5, S1.5, W1.5	A multi-stemmed tree by west boundary. Healthy foliage. Fair form. Good condition.	C1	No work required.	4
		1.68	0.1		SM	Low				
Yes		8.9			10+ years	Gravel, Off-site/no access				
T015	Elder	140	5		Low	N2.5, E2.5, S2.5, W1.5	Tree by west boundary, emerging from a scrubby area. Fair form and condition.	C1	No work required.	4
		1.68	1.5		SM	Low				
Yes		8.9			10+ years	Light undergrowth, Grass				

Explanatory Notes for Tree Constraints Plans

DBH (mm)	Diameter of main stem in millimetres at 1.5 metres from ground level. Where the tree is a multi-stem, the diameter is calculated in accordance with item 4.6.1 of BS 5837:2012.
RPA	This is the Root Protection Area, measured in square metres and defined in BS5837:2012 as “a layout design tool indicating the minimum area around a tree deemed to contain sufficient roots and rooting volume to maintain the tree’s viability, and where the protection of the roots and soil structure is treated as a priority”. The RPA is shown on the drawing. Ideally this is an area around the tree that must be kept clear of construction, level changes of construction operations.
Crown Base	Recorded in metres, the distance from ground and aspect of the lowest branch material.
Crown Spread	Indicates the radius of the crown from the base of the tree in each of the northern, eastern, southern and western aspects.
Age	<p>Recorded as one of the following categories:</p> <p>Y Young. Recently planted or establishing tree that could be transplanted without specialist equipment, i.e. less than 150 mm DBH.</p> <p>S/M Semi-mature. An established tree, but one which has not reached its prospective ultimate height.</p> <p>E/M Early-mature. A tree that is reaching its ultimate potential height, whose growth rate is slowing down but if healthy, will still increase in stem diameter and crown spread.</p> <p>M Mature. A mature specimen with limited potential for any significant increase in size, even if healthy.</p> <p>O/M Over-mature. A senescent or moribund specimen with a limited safe useful life expectancy. Possibly also containing sufficient structural defects with attendant safety and/or duty of care implications.</p> <p>V Veteran. Although there is no exact definition this is usually a tree that is of interest biologically, culturally or aesthetically because of its age, size or condition.</p> <p>D Dead.</p>
Safe Useful Life Expectancy	<p>Relates to the prospective life expectancy of the tree and is given as one of 4 categories:</p> <p>40 years+;</p> <p>20 years+;</p> <p>10 years+;</p> <p>Less than 10 years.</p>

Water Demand This gives the water demand of the species of tree when mature, as given in the NHBC Standards Chapter 4.2 “Building Near Trees”.

BS 5837 Main Category Using this assessment (BS 5837:2012, Table 1), trees can be divided into one of the following simplified categories, and are differentiated by cross-hatching and by colour on the attached drawing:

Category A - Those of high quality with an estimated remaining life expectancy of at least 40 years;

Category B - Those of moderate quality with an estimated remaining life expectancy of at least 40 years;

Category C - Those of low quality with an estimated remaining life expectancy of at least 10 years, or young trees with a stem diameter below 150 mm;

Category U - Those trees in such condition that they cannot realistically be retained as living trees in the context of the current land use for longer than 10 years.

BS 5837 Sub Category Table 1 of BS 5837:2012 also requires a sub-category to be applied to the A, B, C, and U assessments. This allows for a further understanding of the determining classification as follows:

Sub-Category 1 - Mainly arboricultural qualities

Sub-Category 2 - Mainly landscape qualities

Sub-Category 3 - Mainly cultural values, including conservation

Please note that a specimen or landscape feature may fulfil the requirements of more than one Sub-Category.

Recommended Works Identifies the necessary tree work to mitigate anticipated problems and deal with existing problems in the setting at the time of the inspection.

Priority This gives a priority rating to each tree allowing the client to prioritise necessary tree works identified within the Tree Survey.

1 Urgent – works required immediately;

2 Works required within 6 months;

3 Works required within 1 year;

4 Re-inspect in 12 months,

Tree Preservation Order / Conservation Area Online Mapping Extract

