

BS5837:2012 Tree survey

for

East Grinstead Police Station,

East Court House,

East Grinstead,

West Sussex, RH19 3LS.

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Tree Survey with Preliminary

Tree Constraints.

Assessed in accordance with

BS5837:2012

'Trees in relation to design, demolition and construction

-Recommendations'

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1.0 Introduction

1.1 Client Instruction

Simon Ffoulkes Tree Consulting was instructed by Pierre Lederer ZMRP Ltd to undertake a preliminary tree survey at East Grinstead Police Station accordance with BS5837:2012 – Trees in relation to design, demolition and construction – Recommendations.

- 1.1.1 The reason for a BS5837 survey is to comply with The Town and Country Act 1990 legislation, requiring consultation on trees that will or may be affected by the construction process
- 1.1.2 As part of the survey a Tree Constraints plan was to be formulated to show the trees that would be a constraint to the building process.
- 1.1.3 There is a proposal to
- 1.1.4 The requirement of the survey was;
 - To record relevant information about the trees on the topographical plan survey.
 - Include any trees or groups not included on the plan.
 - To provide a report that includes a tree survey and an arboricultural impact assessment (AIA) that will indicate any impacts of the proposed development on the adjacent trees and any effects of retaining the trees on the development.
 - To provide information that shows which trees are a constraint to development.
 - To recommend any trees that require pre-construction management or removal.

1.2 Documents provided

- 1.2.1 A preliminary topo survey Drawing 01T Scale 1:200 (A1)
- 1.2.2 Site Proposal plans for the before and after development

1.3 Scope of the survey

- 1.3.1 The survey relates to trees that are over 75mm diameter at 1.5m height. Groups and hedges may include trees with a smaller diameter.
- 1.3.2 The scope included trees on the Plan drawing that are likely to be affected by the building proposal.
- 1.3.3 The data from the tree survey is provided as an independent survey and does not adhere to specific proposals for the development.

1.4 Survey method

- 1.4.1 The survey method is based around a 'Visual Tree Assessment system' (VTA) that is ratified by the Arboricultural Association and is based on the VTA by *Matteck, C Breloer, H* (1994), '*Visual Assessment of Trees*'.
- 1.4.2 No soil samples were taken. The tree inspection was carried out from the ground. The only tools used were a rubber hammer, a steel probe, a dbh tape, a measuring tape and the use of binoculars. Pictures were taken with a digital camera.
- 1.4.3 All the data recorded was in line with those required within BS5837:2012.
- 1.4.4 All the tree species were recorded, and the trees were categorised in conjunction with the Cascade chart within the BS5837:2012 document.

1.5 Limitations

- 1.5.1 Trees are living organisms means their health and wellbeing can change over time and with climatic conditions. The assessment of risk because of unpredictable events recognises that the tree that is surveyed can only be judged upon factors evident at that time of inspection by a suitably qualified arboricultural inspector. All trees that are within the remit of a survey should be checked on a regular basis that is commensurate with the level of risk posed by the trees. A suitable time frame is between one year and 18 months.

2.0 Site visit and observations

2.1 Site visit

- 2.1.1 A site visit was undertaken on the 5th August 2024 by Simon Ffoulkes a trained arboriculturist

2.2 Site observations

- 2.2.1 The land is accessed via East Court House and free access to the site was available. The rear fenced off area at the rear of the property demarked the boundary with the slope.

3.0 Tree survey

3.1 Tree survey with the constraints

- 3.1.1 The tree survey indicates the grades allocated to the trees and groups on the survey drawing in the **Appendix 2** Tree Survey.
- 3.1.2 The survey identified 18 features that are single trees and groups applicable to the proposed site and construction process. The **Table 1** below indicates which grade has been applied and to how many trees.

Table 1: Grading of features

BS 5837:2012 categories	Trees	Groups
'A' grade	0	0
'B' grade	2	0
'C' grade	5	0
'U' grade	1	0

3.1.3 The grading of the trees is based on the cascade chart from BS5837:2012 which will be found in the **Appendix 2**

3.1.4 The Root Protection Area (RPA) of each tree will be calculated by the tables within BS5837:2012 which are in the **Table 2** below. They are based on the principle of a circle with its centre on the base of each tree.

Table 2 Tree RPA calculation

Number of stems	Calculation
Single stem tree	$\text{RPA(m}^2\text{)} = \frac{(\text{stem diameter mm @ 1.5m x 12})^2}{1000} \times 3.142$
Tree with more than one stem arising below 1.5m above ground level	$\text{RPA(m}^2\text{)} = \frac{(\text{stem diameter 1})^2 + (\text{stem diameter 2})^2 \dots + (\text{stem diameter 5})^2}{1000} \times 3.142$
Trees with more than five stems arising below 1.5m above ground level	$\text{RPA(m}^2\text{)} = \frac{(\text{mean stem diameter})^2 \times \text{number of stems @ 1.5m x 12}}{1000} \times 3.142$

3.1.5 The RPA is not always consistent with a circle and many factors will affect the rooting area of a tree. The deviation of the RPA is discussed in (section 4.6.3 of the BS5837:2012) document. Some factors that may affect the RPA are;

- The presence of roads.
- Topography.
- Drainage
- Soil type and structure
- Previous management

3.1.6 The Tree Constraints drawing is attached within **Appendix 3** and shows the extent of RPA along with Tree protection measures. The above ground constraints are indicated by the

tree canopy spread and tree height. The below ground constraints are indicated by the Tree Constraints plan. Where a tree canopy extends beyond the RPA of the tree, the constraints plan will be extended to include the canopy.

4.0 Arboricultural Impact Assessment (AIA)

4.1 Legal constraints

4.1.1 The Local Planning authority (LPA) is Mid Sussex Council.

4.2 Trees to be pruned or removed

4.2.1 The site plans show there are eight features, the only tree to be removed is T1 a dead cherry tree.

4.3 Tree encroachment

4.3.1 There are no realistic encroachment areas of the trees on the Tree Constraints Plan.

4.3.2 The trees T2 and T3 are part of the landscaping and the construction work will not affect them. The trees G4, T5 and T8 are off site and they will not be affected by the construction.

4.3.3 The tree T7 appears to be off site but this is not clear, but it will not be affected by the construction process.

5.0 Tree protection measures

5.1 General tree protection

5.1.1 There are no tree protection measures required.

5.1.2 Discussion

6.1 Tree Constraints

5.1.1 From the Tree constraints plan **Appendix 3**, there are no trees that will be affected by the construction process.

5.1.2 If it is felt that the landscaping work could damage the trees T2, T3 and T6 and the roots require protection, they can be fenced off, but as they are only 'C' grade trees this would not be essential as their contribution is negligible.

5.1.3 The tree T7 looks as though it will not be affected by the construction or landscape process and therefore requires no protection.

5.1.4 There is no requirement for an Arboricultural Method statement (AMS) as none of the trees to be retained will be affected by the construction process

7.0 Conclusions

7.1 Conclusions

7.1.1 The proposal has no effect on the surrounding trees as shown by the Tree Constraints Plan.

8.0 References

British Standards Institution (2012) *BS5837:2012 – Trees in relation to design, demolition and construction – Recommendations* London: BSI

Mattheck. C and Breloer.H (1994). *The Body Language of Trees*. London: H.M.S.O

NJUG Guidelines for the Planning, Installation and Maintenance of Utility Apparatus in Proximity to Trees

Appendix 1 – Cascade chart

Table 1 – Cascade Chart For Tree Quality Assessment				
Trees for removal				
Category and definition	Criteria			Identification on plan
Category U 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	Trees that have 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 such as where, for whatever reason, the loss of companion shelter cannot be mitigated by pruning Trees that are dead or are showing signs of significant, immediate, and irreversible overall decline. Trees infected with pathogens of significance to the health and/or safety of other trees nearby, for example Dutch Elm Disease, or very low quality trees suppressing adjacent trees of better quality Note – Habitat reinstatement may be appropriate. For example R category tree used as a bat roost: installation of bat box in nearby tree.			Dark Red
Trees to be considered for retention				
Category and definition	Category – Subcategories			Identification on plan
	1. Mainly arboricultural values	2. Mainly landscape values	3. Mainly cultural values, including conservation	
Category A 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.	Trees that are particularly good examples of these species, especially if rare or unusual, or essential components of groups, or of formal or semi-formal Arboricultural features for example 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 for example avenues or other aboricultural features assessed as groups	Trees, groups or woodlands or significant conservation, historical, commemorative or other value for example veteran trees or wood-pasture	Light Green
Category 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.	Trees that might be included in the high category, but are downgraded because of impaired condition. Examples include the presence of remediable defects including unsympathetic past management and minor storm damage	Trees present in numbers, usually as groups or woodlands, so they form distinct landscape features which attract a higher collective rating than they might as individuals. But which are not, individually, essential components of formal or semi-formal arboricultural features. For example trees of moderate quality within an avenue that includes better, A category specimens. Or trees which are internal to the site, therefore individually having little visual impact on the wider locality	Trees with clearly identifiable conservation or other cultural benefits	Mid Blue
Category C Those trees 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	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
	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 150mm should be considered for relocation.			

Appendix 2 – Tree survey

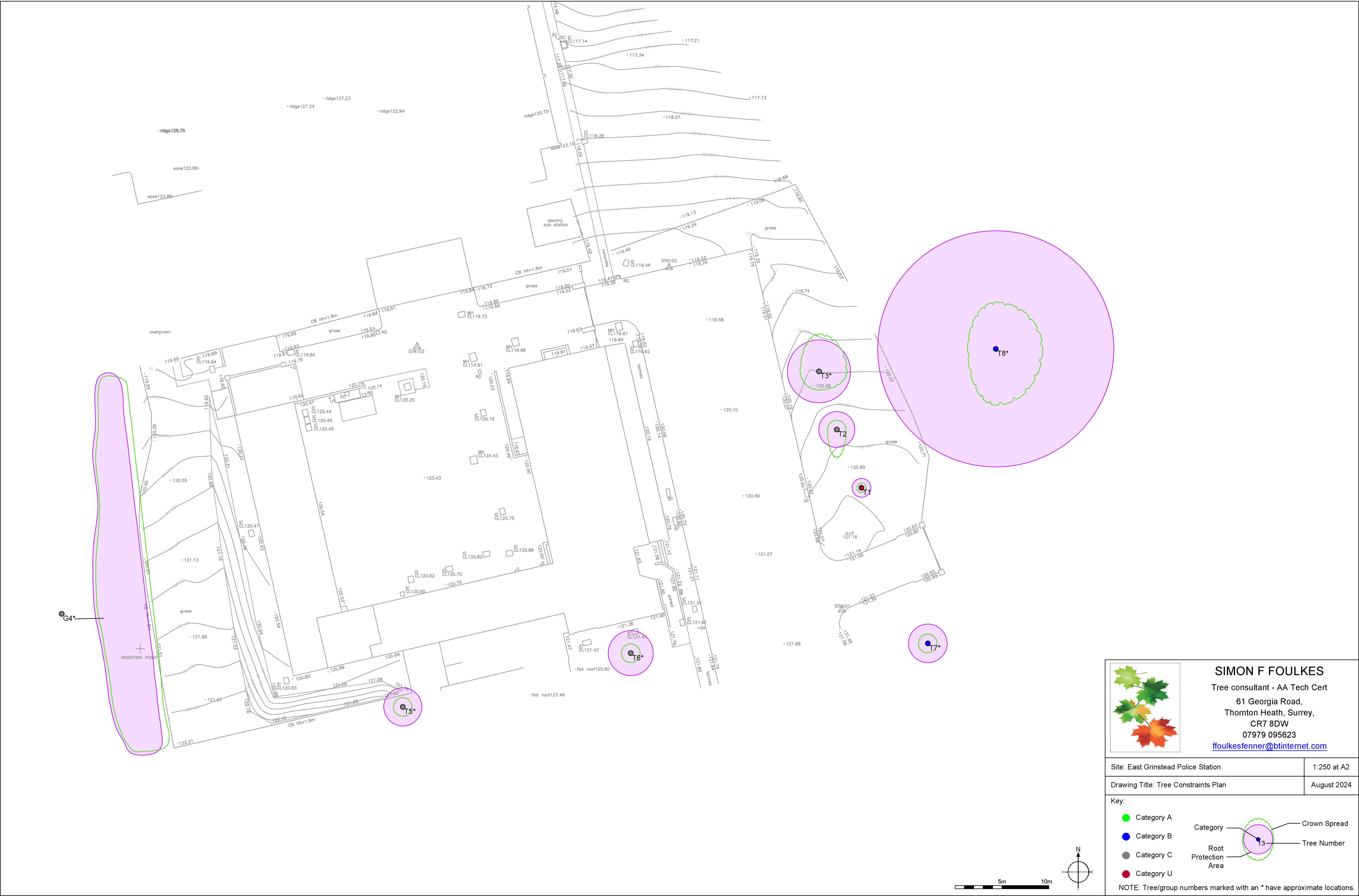
Tree Reference codes:

T = Tree G = Group

Tree Reference number	Species	Height m	Stem Diameter mm	Branch spread m	Height of canopy and first major branch cardinal point	Age class	Physiological Conditions	Preliminary management recommendations	Estimated remaining years	Category Rating
T1	Flowering cherry	4	140	N0.5 S0.5 E0.5 W0.5	1	D	A dead tree	Section fell	0	R
T2	Flowering cherry	3	160	N1 S3 E1 W1	1	EM	S) Good. P) Good, An asymmetric crown shape	None	10+	C1
T3	Flowering cherry	5	280	N4 S2 E3 W2	1	EM	S) Good. P) Good, An etiolated crown	None	10+	C1
G4	Poplar and Sycamore	7	100-140	N1 S1 E2 W1	1	SM	S) Good. P) Good, groups of self-sown trees	None	10+	C1
T5 offsite	Cherry	5	120	N1 S1 E1 W1	1	SM	S) Good. A twin stemmed tree P) Good	None	10+	C1

Tree Reference number	Species	Height m	Stem Diameter mm	Branch spread m	Height of canopy and first major branch cardinal point	Age class	Physiological Conditions	Preliminary management recommendations
T6	Japanese acer	3	120	N1 S1 E1 W1	1	EM	S) Good. P) Good	None
T7	Dove Tree	6	200 at the base	N1 S1 E1 W1	1	EM	S) Good. P) Good	None
T8 offsite	English oak	20+	1050	N5 S6 E5 W3	2	M	S) Good. P) Good, some large dead wood	None

Appendix 3 – Tree constraints plan



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Site: East Grinstead Police Station	1:250 at A2
Drawing Title: Tree Constraints Plan	August 2024

Key:

● Category A

● Category B

● Category C

● Category D

Category

Root Protection Area

Crown Spread

Tree Number

NOTE: Tree/group numbers marked with an * have approximate locations.