

David Thorman Arboricultural Consultants

Complete tree and woodland advisory and management service

Your ref: e-mail
My ref: RD/1983/dht

Melvin Gough Esq
Design and Planning Associates Ltd
15 Salop Road
Oswestry

18 March 2010

Dear Mr Gough

Dean Cottage, Bronington

Thank you for your instructions of 12 March 2010, and the plans of the site. I visited the site on 17th March, and submit the following report.

1. Instructions and terms of the survey

1.1 I am instructed to carry out an inspection of the trees on land at Dean Cottage, Bronington. The assessment includes: the general health and condition of the trees; their suitability for the site; recommendations for remedial work on retained trees where this is considered necessary for health and safety and will prolong the life of the tree, or felling/removal where there is risk to the public and/or where this will favour the health and development of other trees. These recommendations are not absolute, as final management decisions will depend on site layout, demolition, and the location of trees relative to the development. Recommendations and specifications for tree protection during construction works are also given in accordance with BS5837:2005.

1.2 I am in receipt of reports, plans and drawings of the site, viz:

- * A 1:200 topographical plan no P-01
- * A 1:2500 location plan

1.3 The survey is from ground level observations, and does not include the use of drilling equipment or other diagnostic devices, but recommendations may be made for more detailed inspections if necessary

1.4 Individual trees are numbered on a copy of the topographical plan, corresponding to Table 1.

1.5 It is not certain that all the trees on the topographical plan are accurately located. This needs to be checked before a final layout is established and the position of tree protective fencing is specified. The location of the fence should be checked on site when it is being erected and cross referenced to the TPZ distances given in the table.

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2 Site and surroundings

- 2.1 The site is the extensive garden on the southern side of Dean Cottage. At present it is a grassed area with various trees. There is a boundary broadleaved hedge around the site. There is a large workshop at the southern end of the garden,

3. Description and assessment of the trees

- 3.1 The trees on this site are of mixed age and size, randomly located throughout the site. The principle tree is a large mature oak situated close to the roadside boundary.
- 3.2 The purpose of this survey is not only to examine trees for defects and general condition, but to assess their amenity value and general suitability for retention within the context of the proposed development. This takes into account tree condition and life expectancy, but also their age, species, conservation importance and singularity. For this purpose trees are categorised into 4 categories designated **Ret. Cat.** in the table (*see appendix 1*). General health and condition of the trees is also categorised between **Good - Poor** (*see appendix 5*).
- 3.3 Heights of the trees have been measured approximately. Trunk diameters (Dbh) have been measured with a calliper or a girth tape. Crown spreads have been measured to 4 compass points where possible, but these have not been transposed onto the plan.
- 3.4 Tree details and measurements - **table 1**

4. Tree management in relation to construction (general guide)

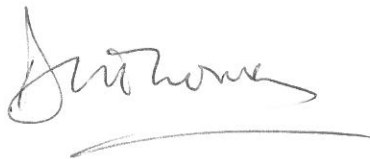
- 4.1 The **Ret. Cat.** column in the table gives guidance on the choice of trees for retention. If possible, all the **A** trees should be retained and incorporated into the development. **B** trees are of value, and could be retained provided that they do not seriously impair the layout. **C** trees are of no particular value, but could be retained if they are some distance from any proposed building. They may however have defects requiring attention, and there should be an evaluation of the relative value against costs of remedial work. However, if they fit in well with the layout, and they are of good quality, they could be retained. **D** trees are either detrimental to the site, or are hazardous, and should be removed. **R** trees are young and can be easily replaced
- 4.2 **TPZ** (Tree Protection Zone) refers to the area of ground around a tree that should be undisturbed in any way if the tree or trees are to be unaffected by damage or disturbance to its roots that may have detrimental effects on tree health and stability. The distances given in this column are the minimum radial distances from the trunk at which protective fencing should be erected.
- 4.3 Precautions should be taken to protect trees before and during development. Guidance is given in BS5837:2005 "Trees in relation to construction - Recommendations". It is recommended that a totally disturbance free ground (**TPZ** in the table) should be provided around retained trees at the distances specified in the table. When it is decided which trees are to be retained, protective fencing should be installed. Root cutting, compaction due to heavy vehicle movement and soil pollution are included in the operations that damage trees on construction sites. It is therefore imperative that the fencing is strong enough to withstand any incursion into the disturbance free areas. Even the parts of the site at some distance from proposed units can be subject to the spill over of construction activities, such as burning of waste materials. In the case of groups of trees, a fence should be installed around the group at the limits required for the edge trees.
- 4.4 The location and routes for the services should if at all possible be outside the protection zones for the trees. If however this presents insurmountable difficulties, there are methods that can be employed to route service lines underneath tree roots without damaging them. Hand dug trenches or a "mole" are amongst the methods used. The tree protection zones should be kept free of all other activities.
- 4.5 Drives, footpaths and car parking spaces close to trees can be constructed close to trees provided that the construction is above existing ground, and there is no significant excavation of the surface. Guidance on the type of materials and method of construction can be found in Arboricultural Practice Note APN 12 prepared by the Arboricultural Information and Advisory Service.
- 4.6 Once it has been decided which trees are to be retained, it is recommended that any remedial works are undertaken before any construction activities commence. Tree surgery works should be to the minimum standards of BS3998:1989 "Recommendations for Tree Work".

5. Development proposals - effects on trees

- 5.1 None of the important trees that can be retained will be affected by the development provided that necessary protection and precautions as outlined above are put in place. The large oak tree no 5 is 13m from the new building, allowing sufficient space for a protective fence at the TPZ distance. The extended drive will be within the TPZ, but an above ground driveway construction in accordance with APN 10 (*see para.4.5 above and appendix 6*). As the level of the site is fairly even, this should not be difficult. The final driveway should be installed after completion of the building. No construction traffic should enter the TPZ.
- 5.2 The new building is just at the TPZ distance from the two trees numbered 14 & 15 (birch and maple). However, they are of no particular significance. Although they are in good condition, they can be replaced if desired with no real detriment to amenity.
- 5.3 Tree no 6, a young willow is close to the edge of the existing drive. It is unlikely to survive the construction process, and the various site activities. However, it can be retained and protected if desired, so the position of the protective fence has been located just around it. However, if there is serious conflict, it should be removed and replaced, and the protective fence can be adjusted up to the TPZ of the oak no 5.
- 5.4 The pear tree no 4 is in a seriously decayed condition, and should be removed.
- 5.5 The remainder of the trees on the site are sufficiently distant from the new building to be unaffected during construction, provided that protection is maintained.

6. Conclusions

- 6.1 Provided that all precautions for tree protection is implemented and maintained, I see no arboricultural reason why the development should not be approved.

A handwritten signature in black ink, appearing to read 'D.H. Thorman', with a horizontal line underneath.

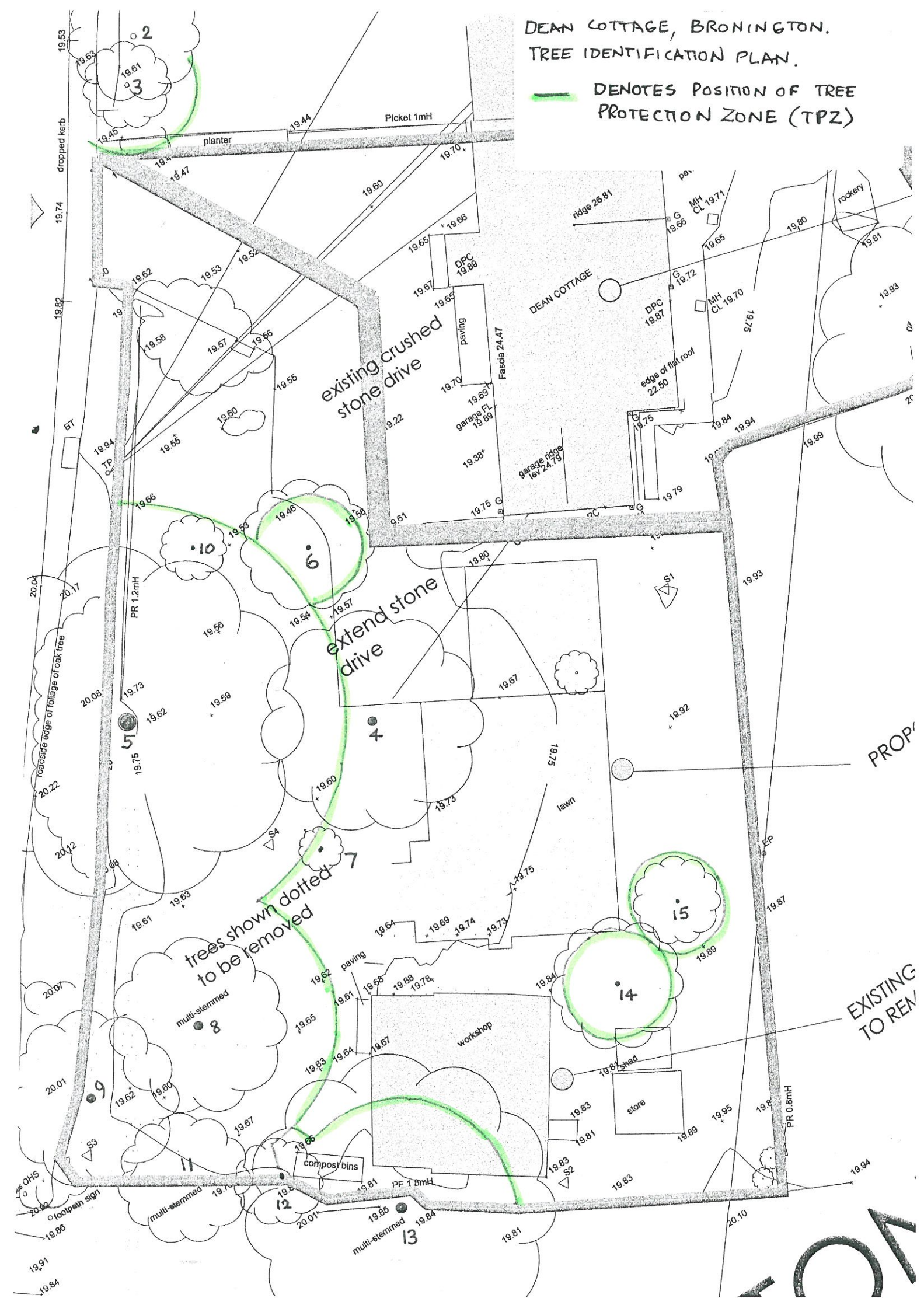
D.H.Thorman B.Sc., F.Arbor.A.

Land at Dean Cottage, Bronnington - Arboricultural implication assessment

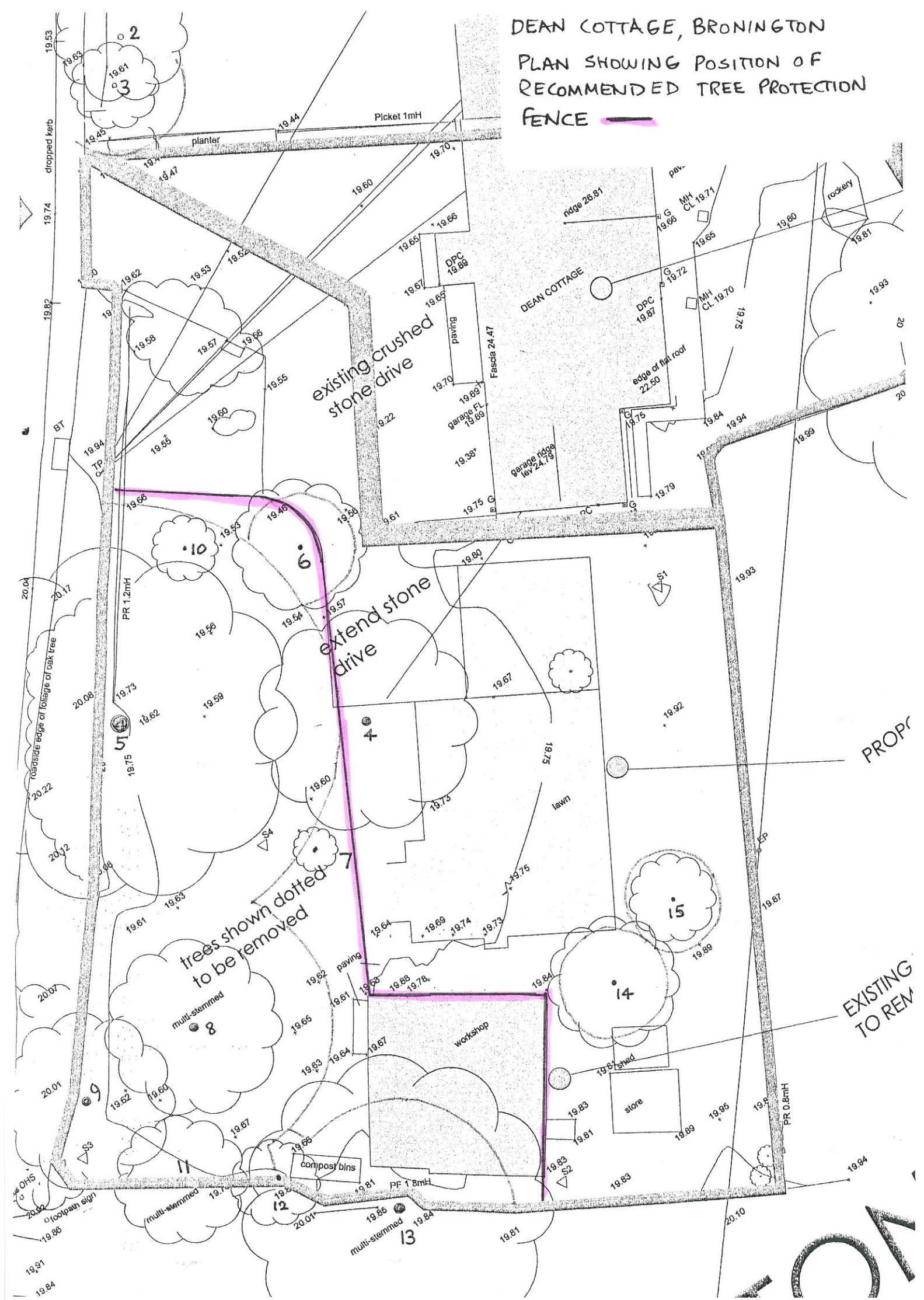
Table 1

Tree No.	Species	Age class	Appx hgt(m)	dbh (cm)	Crown Spread	Condition	Description & assessment	Recommendations & other comments	Ret. cat.	TPZ
1	Spruce	YM	12	40 (est)		GOOD	Tree in neighbouring garden	None	N/a	5m
2	Spruce	YM	12	25 (est)		GOOD	Tree in neighbouring garden	None	N/a	3m
3	Spruce	YM	12	25 (est)		GOOD	Tree in neighbouring garden	None	N/a	3m
4	Pear	M	11	44	N4, S5 E5, W4	POOR	Large deep cavity in trunk, extensive decay	Fell	D	--
5	Oak	M	16	84	N6, S7 E7, W5	GOOD/fair	Straightupright trunk, divides at appx 5m. One stem angles east, the other is upright. Slow annual extension growth. Dead wood in crown.	Clean crown Crown reduction on SE side may be necessary	A	10m
6	Willow	YM	6	18	7m dia.	GOOD/fair	Has been topped and has grown a new weeping crown	None	C	2m
7	Birch	SM	10	13	N2, S2 E2, W1	GOOD	Can be replaced	None	R	1.5m
8	Ash	M	16	38* 29* 65 at GL	N5, S5 E4, W3	GOOD/fair	Twin stem from 0.5m above GL. Good union. South stem bends at appx 4m, then becomes more upright. Either lost leader at this point, or it has been topped. Similar feature on other stem. Considerable leverage stress at fork	Consider removal	C	6m
9	Ash	M	16	43	N6, S4 E4, W6	GOOD	Straight upright trunk, divides into 3 or 4 stems at appx 4m. Dense crown which is biased NW	None	B	5m
10	Apple	SM	3	10		GOOD	Can be replaced		R	1m
11	Ash	YM	15	33	N3, E5	GOOD/fair	Growing within boundary hedge. Previously 2 stems from GL. Long slender trunk, divides into 2 at appx 5m. Trunk leans east up to 2m, then bends upright.	None	B	4m
12	Holly	YM	7	19		FAIR	Trunk obscured by hedge up to 1.5m. Small high crown	None	C	2m
13	Ash	M	15	43* 32*	NE6 (est) N5	GOOD/fair	2 trunks from below GL. SW trunk divides into 2 at appx 3m. A large pit has been excavated on SW side. Other trunk leans NE over workshop.	Possibly remove NE trunk	B	5m
14	Birch	YM	9	20	NSEW 3	GOOD	Young tree, good form	None	C	2.5m
15	Maple spp	SM	6	15	NSEW 2	FAIR	Slow annual extension growth	None	C	2m
16	Ash	M	15	56	N&W 6	GOOD	Specimen tree in rear garden of Dean Cottage.	None	A	6.5m

— DENOTES POSITION OF TREE PROTECTION ZONE (TPZ)



DEAN COTTAGE, BRONINGTON
PLAN SHOWING POSITION OF
RECOMMENDED TREE PROTECTION
FENCE



Land at Dean Cottage, Bronington - Arboricultural implication assessment

Appendices Contents

1. Suitability of trees for retention. Definition Ret.Cat. designation
2. Age class
3. Tree heights, diameters and crown spreads
4. Definition of TPZ and RPA
5. Tree condition
6. Tree protection

Land at Dean Cottage, Bronington - Arboricultural implication assessment

Appendix 1 Suitability of trees for retention

Ret. Categ. denotes Amenity Value in terms of future life expectancy, relationships with other trees and suitability to the site. There may be trees that are in good health but are a totally unsuitable species, are competing with another more favoured species, or require removal as part of good forestry/landscape management. The retention category is rated A to D, and is based on the guidelines in BS5837:2005.

- A** Trees whose retention is most desirable, in good health and potentially an asset to the site, with a reasonably long life expectancy. There may be very minor defects which can be rectified (
- B** Trees where retention would be desirable, but do not quite have the quality of 'A' category trees. They may have some defects which may be remedied by tree surgery or improvements in their environment, and which could have long term amenity value to the site.
- C** Trees which could be retained, provided that they do not seriously compromise the development layout, but have one or more of the following features
 - (i) significant defects, and where surgery is not viable
 - (ii) are suppressed by other trees
 - (iii) have a short life expectancy
 - (iv) have no particular merit.
- D** Trees with major structural or other defects, dying and/or dangerous trees, or trees totally unsuitable for the site.
- R** Very young trees that can easily be replaced, and should not stand in the way of development

2. Age class

- Y** Young tree less than 10yr old
- SM** Semi-mature trees, established, up to one third of mature height.
- YM** Young mature trees, between one and two thirds of expected height
- M** Mature trees, between two thirds and full mature height, but still increasing in girth fairly quickly.
- LM** Mature trees, approaching full height and with a large girth, still increasing slowly
- OM** Almost full height, or at full height with a large girth increasing very slowly.

Land at Dean Cottage, Bronington - Arboricultural implication assessment

Appendix 3. Tree heights, diameters and crown spread in table

- (i) **Heights** Measurements are approximate
- (ii) **Dbh** = Trunk diameter at breast height.
- (iii) **Crown spread** = radial from trunk centre where it is possible to gain access to trunk base.
Where trees are in a woodland or closed canopy, it is usually not possible to assess the entire actual spread. Measurements are given to 4 points of compass where possible, but some are given for one or two directions only.

- 4. TPZ (Tree protection zone)** refers to the area of ground around a tree that should be undisturbed in any way if the tree or trees are to be unaffected by damage or disturbance to its roots that may have detrimental effects on tree health and stability. The distances given in this column are the minimum at which protective fencing should normally be erected, as measured from the trunk centre. **RPA** (Root protection area) is the area around the tree that is calculated by the formula $RPA = [TPZ]^2 \times 3.142$. The position of the trunk can be varied from the centre of the TPZ circle by up to 20% provided that the RPA remains constant. The allowance for this is dependant on various environmental and biological factors.

When adjusting the layout of proposed development on the site, other factors require consideration in addition to the TPZ. The availability of light and space and future growth may pose problems for residents if trees are situated in close proximity to buildings. There is also the provision of working space during construction. The TPZ distance therefore is **not** synonymous with the distance of structures from the tree, but is designed to protect trees from construction activities.

Appendix 5. Tree Condition

- GOOD.** A tree with few or no real defects, and in general good health. Reasonably long life expectancy.
- GOOD/Fair.** Some minor defects that may require treatment. Life expectancy is in the order of 30 years or more, but could be shortened by these defects, which may not be treatable.
- FAIR.** The tree has defects, and may require surgery. The defects may be related to general health and not be treatable, and could shorten life expectancy.
- FAIR/Poor** The tree has significant defects or diseases that may not constitute a safety hazard, but, are not treatable, and give the tree a short life expectancy. It may be desirable to retain the tree in the short term.
- POOR.** Major defects, either in the tree or its environment.
Either: major surgery or felling required, depending on risk assessment.
Fairly short life expectancy.
OR: The tree may be in very poor health

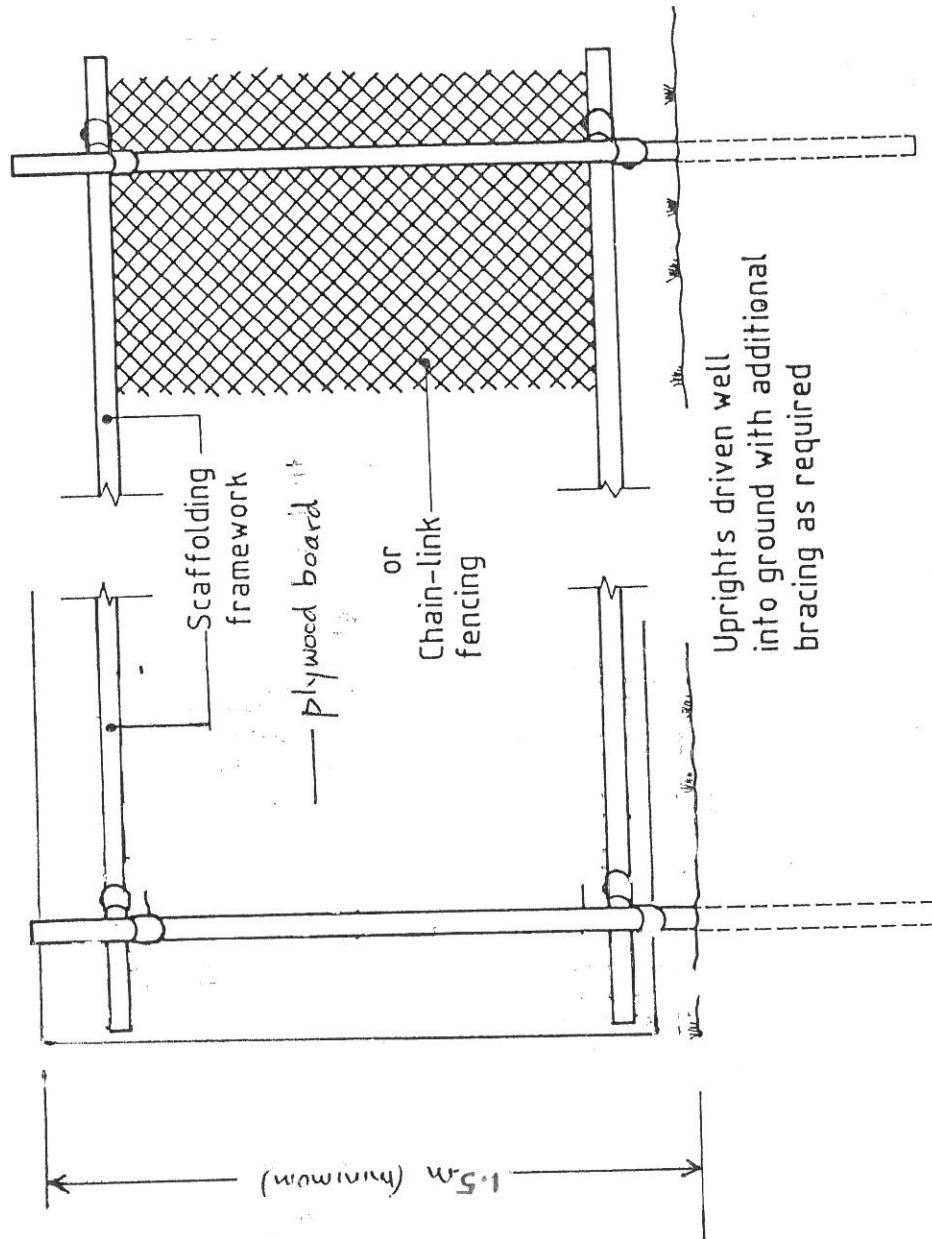


fig 1. Protective barrier on small or difficult sites.

Figure 5. Diagram of a 'no-dig' method for constructing access drives and parking near to trees in order to minimise damage to tree roots. (*Not to scale*)

