



TREE SURVEY AND REPORT

PREPARED TO SATISFY BS 5837:2012

Trees in relation to design, demolition and construction – Recommendations.

FOR

Denise Pease

CARRIED OUT AT

**18a Ocean Drive
Ferring
BN12 5GJ**

By

Ben McWalter MRICS M.Arbor.A.

Registered



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1. SUMMARY

- 1.1. This report provides survey information about the trees adjacent to 18a Ocean Drive, Ferring in accordance with the recommendations of BS5837:2012 Trees in relation to design, demolition and construction – Recommendations. This is to identify the quality and value of the existing trees, allowing decisions to be made as to the retention or removal of trees in the case of any development.
- 1.2. The subject trees have been categorised as follows:

BS Category	Number of individual trees	Tree Groups
U	0	0
A	2	0
B	0	0
C	0	0

2. INTRODUCTION

- 2.1. HTC were instructed by Denise Pease, in July 2021, to survey and categorise the trees adjacent to 18a Ocean Drive in accordance with BS5837:2012 Trees in relation to design, demolition and construction – Recommendations. The survey includes the significant trees with a stem diameter greater than 75mm at a height of 1.5m above ground level that are on site or close enough to pose a potential constraint to development.
- 2.2. The survey was carried out to assess the trees on site for their quality and benefits within the context of any proposed development. The quality of each tree, or group of trees has been recorded by allocating it to one of four categories, where:
- Trees of A and B category can be considered as being influential to development and, where practical, should be incorporated into any proposed development design.
 - C category trees will not usually be retained where they would impose a significant constraint to development, but should be retained where there is no reason for their removal.
 - U category trees are in such a condition that they are unlikely to contribute beyond 10 years and may be removed as good arboricultural practice.
- 2.3. This report provides the data and advice outlined in BS5837:2012 only. It must not be substituted for a tree risk assessment. Detailed tree inspection including decay mapping or aerial inspection was not undertaken. If further detailed inspection is deemed necessary, then it will be made clear within this report.

- 2.4. We have not been instructed at this stage to contact the Local Authority, however the client has confirmed that the trees are subject to a Tree Preservation Order.
- 2.5 The Tree Constraints Plan 18 Ocean drive – tree plan for rpa rev02 appended to this report which accompanied the Planning Application has been provided to us by the applicant. We have measured the relevant trees and determined the relevant Root Protection Areas as per Section **4.6 Root protection area (RPA)** in BS 5837.
- 2.6 Our survey and report does not consider the current and potential height of any trees to be retained as this is of no significance to the proposed design layout.

3. SCOPE AND METHOD OF SURVEY

- 3.1. The survey has been carried out in accordance with BS5837:2012 Trees in Relation to design, demolition and construction - Recommendations and the trees are assessed objectively and without reference to any site layout proposals. Categories are based on each tree's health and condition, together with an assessment of its life expectancy if its surroundings were to be unchanged. An explanation of the categories can be found at appendix 1.
- 3.2. No discussions took place between the surveyor and any other party.
- 3.3. The reference numbers of surveyed trees are shown on the Tree Plan, which is appended to this report.
- 3.4. The tree survey was carried out from ground level only.
- 3.5. Tree heights were not measured.
- 3.6. Trunk diameters were measured with a 'dbh' tape. Single stemmed trees are measured at 1.5m from ground level. Multiple stemmed trees are measured according to section 4.6 of BS5837:2012.

4. DISCUSSION

- 4.1. For individual details of the subject trees see the survey at appendix 2
- 4.2. The site is comprised of a semi-detached residential property located within a rural setting. The application is to erect a single storey garden building as consented by Arun District council under the reference FG/79/21/PL.
- 4.3. A detailed soil assessment has not been provided to us.

- 4.4. The site is located in a residential setting.
- 4.5. The above and below ground constraints posed by the trees are represented by Root Protection Areas (RPAs) and are shown on the appended Tree Constraints Plan 18 ocean drive – tree plan for rpa Rev02. The RPA of a tree is calculated as advised by BS5837:2012. For a tree growing in an apparently unconstrained rooting environment a circular RPA is shown. Where the development of the roots of a tree has been influenced by environmental factors, or pre-existing site conditions indicate that rooting has occurred asymmetrically, the RPA has been adjusted to represent a likely distribution.

Tree Categorization

- 4.6. The purpose of the tree categorization method is to identify the quality and value (in a non-fiscal sense) of the existing tree stock, allowing informed decisions to be made concerning which trees should be removed or retained.
- 4.7. The tree population is comprised of a belt of high value trees which are subject to a TPO and form an important amenity and landscape feature. The trees are categorised as being Category A.

Root Protection Areas

- 4.8. The Root Protection Areas of these trees have been plotted on the plan supplied to us, which is considered to be accurate and in line with the guidance of BS 5837. Root Protection Areas are plotted as a circle where it is considered likely for there to be an undisturbed rooting area.
- 4.9. The RPAs of these trees are likely to have been materially affected by the presence of the tarmac road through the Poplars, resulting in fewer significant roots being present in the garden of 18a Ocean Drive than had the road not been present.

5. PROPOSALS: CONCEPTION AND DESIGN

- 5.1. The constraints imposed by trees, both above and below ground should inform the site layout design. Certain trees are of such importance and sensitivity as to be major constraints on development or to justify its substantial modification.

Constraints imposed by existing trees.

- 5.2. The footprint of the proposed development will intrude into the RPA of a retained tree, however this incursion will be within the guidelines of BS 5837 by employing a floating concrete raft system and encompassing approximately 1.2 m² of the likely 179.5 m².
- 5.3. The existing garden entrance is to be used for site access.

Proximity of structures to trees

- 5.5. The default position is that structures are located outside the RPAs of trees to be retained. However, it is unlikely that significant roots from T1 are present in numbers sufficient for the proposal to cause harm.
- 5.6. A realistic assessment of the probable impact of any proposed development on the trees and vice versa should take into account the characteristics and condition of the trees, with due allowance and space for their future growth and maintenance requirements.
- 5.7. The proposed development will not be impacted by any retained trees. The impact of the proposed development on the retained trees can be managed using a floating concrete raft construction method.
- 5.8. The garden building will not be shaded to any greater degree than the property and therefore shading is not a consideration for this development.
- 5.9. The employment of a floating raft will allow for the future development of any roots.

Arboricultural impact assessment

- 5.10. An assessment of the direct and indirect effects of the proposed design, taking into account the effects of any tree loss required to implement the design, and any potentially damaging activities proposed in the vicinity of the retained trees.

Tree protection plan

- 5.11. The Tree constraints plan appended to this report shows the location of trees. The existing close-board fencing is considered to offer adequate protection for the retained trees.
- 5.12. Care shall be taken when planning site operations in proximity of retained trees to ensure that work does not cause harm to any trees.
- 5.13. Inside the garden area, the following shall apply:
- No mechanical excavation whatsoever
 - No excavation by any other means without arboricultural site supervision
 - No hand digging without a written method statement having first been approved by the project arboriculturist.
 - No lowering of levels for any purpose (except removal of grass sward using hand tools)
 - No storage of plant or materials
 - No storage or handling of any chemical including cement washings.
 - No vehicular access

-
- No fire lighting.

5.14. It is considered that the site comprises sufficient area to provide adequate site storage, contractor parking, welfare facilities and material drop off points.

5.15. The site is considered to contain sufficient existing open space to preclude the need for further ground protection measures.

New planting design and associated landscape operations

5.16. We have not been made aware of any proposed new landscaping or planting.

6. ARBORICULTURAL METHOD STATEMENT

1. PHASING OF OPERATIONS

- 1.1. The development on this site does not require Arboricultural supervision.
- 1.2. An impervious membrane must be laid to cover the area of the concrete pad prior to any foundation construction. This is essential to prevent run-off impacting the tree roots and must be installed as soon as the grass sward has been removed.

2. MONITORING AND SUPERVISION

- 2.1. Arboricultural monitoring is not required for this project as the existing close board fencing provides sufficient protection to the trees and harm to the roots can be managed by implementing the proposed construction method.
- 2.2. The local authority arboriculturist will have free access to the site and pass any recommendations direct to the project arboriculturist.

3. TREE PROTECTION AREAS

- 3.1. Based on tree survey data, tree protection can be assured by the proposed method.
- 3.2. It is the responsibility of everyone engaged in the construction process to respect the tree protection measures and observe the necessary precautions within and adjacent to them.

4. RESTRICTIONS WITHIN TREE PROTECTION AREAS

- 4.1. Inside the exclusion area of the fencing, the following shall apply:
 - No mechanical excavation whatsoever
 - No excavation by any other means without arboricultural site supervision
 - No hand digging without a written method statement having first been approved by the

project arboriculturist.

- No lowering of levels for any purpose (except removal of grass sward using hand tools)
- No storage of plant or materials
- No storage or handling of any chemical including cement washings
- No vehicular access
- No fire lighting

4.2. In addition to the above, further precautions are necessary adjacent to trees:

- No substances injurious to tree health, including fuels, oil, bitumen, cement (including cement washings), builders sand, concrete mixing and other chemicals shall be stored or used within or directly adjacent to the protection area of retained trees
- No fire shall be lit such that flames come within 5m of tree foliage.

5. AVOIDING DAMAGE TO STEMS AND BRANCHES

5.1. Care shall be taken when planning site operations in proximity of retained trees to ensure that wide or tall loads, or plant with booms, jibs and counterweights, can operate without coming into contact with retained trees. Such contact can result in serious injury to the trees and might make their safe retention impossible.

5.2. Consequently, any transit or traverse of plant in proximity of trees shall be conducted under the supervision of a banksman, to ensure that adequate clearance from trees is at all times maintained. In some circumstances, it may be impossible to achieve this without pruning works known as 'access facilitation pruning'.

5.3. Access facilitation pruning is not considered necessary for this project.

6. TREE PROTECTION FENCING

6.1. It is not considered necessary to install any further tree protection measures.

7 CONCLUSIONS AND RECOMMENDATIONS

7.1 Trees of A and B category may be considered as influential in development design and where appropriate they should be incorporated into any proposed development design. Trees of a C category will not usually be retained where they would impose a significant constraint to development. U category trees are in such a condition that they will be lost within 10 years and may be removed as good arboricultural practice.

7.2 Trees can be a development constraint both below and above the ground. In terms of below ground constraints, BS5837:2012 RPAs indicate an area that contains sufficient rooting volume to ensure survival of the tree. This area of ground should be left undisturbed during demolition and construction by prohibiting activity from the area using protective fencing.

7.3 The consented scheme can be successfully implemented while protecting the trees.

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Arboriculturist
27.07.2021

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APPENDIX 1: SUMMARY OF CATEGORIES BS5837:2012

BS5837:2012 Table 1 - Cascade chart for tree quality assessment			
Category and definition	Criteria (including subcategories where appropriate)		
Trees unsuitable for retention (see Note)			
Category U Those in such a condition that they cannot realistically be retained as living trees in the context of the current land use for longer than 10 years	*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 category U trees (e.g. 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, or very low quality trees suppressing adjacent trees of better quality <i>NOTE Category U trees can have existing or potential conservation value which it might be desirable to preserve; see 4.5.7.</i>		
	1 Mainly arboricultural qualities	2 Mainly landscape qualities	3 Mainly cultural values, including conservation
Trees to be considered for retention			
Category A Trees of high quality with an estimated remaining life expectancy of at least 40 years	Trees that are particularly good examples of their species, especially if rare or unusual; or those that are essential components of groups or formal or semi-formal arboricultural features (e.g. the dominant and/or principal trees within an avenue)	Trees, groups or woodlands of particular visual importance as arboricultural and/or landscape features	Trees, groups or woodlands of significant conservation, historical, commemorative or other value (e.g. veteran trees or wood-pasture)
Category B Trees of moderate quality with an estimated remaining life expectancy of at least 20 years	Trees that might be included in category A, but are downgraded because of impaired condition (e.g. presence of significant though remediable defects, including unsympathetic past management and storm damage), such that they are unlikely to be suitable for retention for beyond 40 years; or trees lacking the special quality necessary to merit the category A designation	Trees present in numbers, usually growing as groups or woodlands, such that they attract a higher collective rating than they might as individuals; or trees occurring as collectives but situated so as to make little visual contribution to the wider locality	Trees with material conservation or other cultural value
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	Unremarkable trees of very limited merit or such impaired condition that they do not qualify in higher categories	Trees present in groups or woodlands, but without this conferring on them significantly greater collective landscape value; and/or trees offering low or only temporary/transient landscape benefits	Trees with no material conservation or other cultural value

APPENDIX 2: TREE SURVEY SCHEDULE

Client: Denise Poase									Report No. C 2060 tr			Surveyor: B. McWalter	
Site: 18a Ocean Drive, Ferring									Weather: Clear				
No.	Name	Height	Dia. (Stems)	Canopy spread				Life Stage	ERC	Comments & preliminary recommendations	BS Cat	RPA m²	
				N	E	S	W						
1	Pine	14	630 (1)	4	8	4	4	M	20+	Fine trees forming an important landscape feature.	A	179	
2	Pine	12	470 (1)	3	6	3	3	M	20+		A	100	

Notes: Dia. (stems): trunk diameter in mm at 1.5m above ground level (number of stems) ; HT (crown): Tree height ; Life stage: Y: Young (obviously planted within the last three years (unless as a heavy or extra-heavy standard)), SM: Semi mature (recently planted and yet to attain mature stature, up to 25% of attainable age.), EM: Early mature (almost full height, crown still developing and seed bearing, up to 50% of attainable age.), M: Mature (full height, crown spread, seed bearing, over 50% of attainable age.) OM: Over mature (full size, die-back, small leaf size, poor growth extension.) ; ERC: Expected remaining contribution in years-<10, 10+, 20+, 40+ (assuming that there will be no physical changes to its immediate environment.) BS Category: Refer to appendix 1 of this report or BS5837:2012 Table 1 for detailed description

APPENDIX 3: TREE PLAN

Plan showing location of trees

T1 Circumference @ breast = 1980mm
Diameter @ breast = 630mm
Multiply diameter by 12 (BS 5837) = 7.5m
RPA radius = 7.5m

T2 Circumference @ breast = 1580mm
Diameter @ breast = 470mm
Multiply diameter by 12 (BS 5837) = 5.6m
RPA radius = 5.6m

