



ARBORICULTURAL IMPACT ASSESSMENT **& Method Statement**

Land at Briar Bank, Manor Road, Hayling Island

-prepared on behalf of Mr P Nelson –

Bernie Harverson M.Arb.

3 foxcombe cottages • south harting • west sussex • gu31 5pl
tel: 01730 825297 • mob: 07875 520881 • email: bernie.harverson@virgin.net • VAT Reg No. 881 5056 16

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1.0 INTRODUCTION & CLIENTS BRIEF

- 1.1 The proposed development site is in everyday use as a residential dwelling and the current proposals involve demolition of a sunroom and constructing an extension to the rear of the property.
- 1.2 There are trees on and adjacent to this site that might be affected by the proposals which is why I have been employed to address the arboricultural issues and to compile all necessary reports and plans in support of the scheme.
- 1.3 In advising my clients I am duty bound to comply with 'Best Practice' industry guidelines and to follow the recommendations contained in BS5837:2012 – Tree In Relation To Design, Demolition and Construction Recommendations – adopting the sequential approach illustrated in the *Figure 1 Flow Diagram – The design and construction process and tree care.*

2.0 DOCUMENT & DRAWING DISCLOSURE STATEMENT

- 2.1 I have been provided with a base plan by **Martin Critchley Architects** for the purposes of illustrating the tree survey data and I place total reliance on the accuracy of this drawing for my plotting of tree positions; canopy spreads and Root Protection Zones.
- 2.2 For the purposes of my work on this project I have also been supplied with a copy of the planning layout drawings as prepared by **Martin Critchley Architects** which I am advised will be submitted seeking planning approval:-
 - **1258-101-Rev 0 + 1258-311-Rev C + 1258-312-Rev A + 1258-401-Rev A + 1258-412- Rev A – all of which are at 1:200 scale @ A3**
- 2.3 I place total reliance on the accuracy of these drawings in advising my clients on tree issues and compiling this report.

3.0 TREE SURVEY & ROOT PROTECTION AREA (RPA) SCHEDULES & PLANS

- 3.1 The Tree Survey exercise was carried out on **Monday 9th September 2014** and a copy of the **Tree Survey Schedule** is included at [appendix BH1 \[with explanatory notes\]](#) and the survey recorded **6** Individual trees and **1** Group.
- 3.2 The data obtained from the Tree Survey exercise has been utilised to prepare the **Root Protection Area Schedule** and a copy of the RPA Schedule is included at [appendix BH2 \[with explanatory notes\]](#).
- 3.3 Plans have been prepared to accompany the schedules and a copy of the combined **Tree Survey and Root Protection Plan - BJH 01/02** is included at [appendix BH3](#).

4.0 CONSTRAINTS POSED BY EXISTING TREES – ASSESSMENT OF ABOVE AND BELOW GROUND CONSTRAINTS

- 4.1 The RPA's have been plotted onto a copy of the Layout Proposals and the implications for the above and below ground impact on trees both on and adjacent to the development site has been recorded onto earlier versions of the **Tree Retentions and Removals Plan - BJH.03** with a finalised copy provided at [appendix BH4](#) [*N.B. wherever possible this will have been disclosed to the clients as part of the ongoing arboricultural advice and guidance tendered during the design process leading up to the submission of this report which is based on the Finalised Layout Proposals*].

5.0 PROXIMITY OF STRUCTURES TO TREES

BS5837 states that the default position should be that structures are located outside the RPA's of trees to be retained. However, where there is an overriding justification for construction within the RPA, technical solutions might be available that prevent damage to the tree(s) and requires that if operations within the RPA are proposed, the project arboriculturist should detail them and explain how they might be overcome or mitigated and this is dealt with in detail as part of the Arboricultural Impact Assessment at 6.0 below and shown on the **Tree Retentions & Removals Plan BJH.03** and **Tree Protection Plan BJH.04** both of which are included at [appendix BH4](#).

6.0 ARBORICULTURAL IMPACT ASSESSMENT

6.1 The finalised planning layout drawing has been provided to me and an assessment made as to the viability of retaining trees as part of this layout in order that they meet the RPA requirements of BS5837 and the data is presented here in tabular format:-

Key: UF = Under footprint **YES** = tree can be retained and fully protected **YES (1)** = tree can be retained subject to mitigation measures being applied

NO-RSAM = tree will be removed for sound arboricultural management reasons **NO-RTFD** = tree cannot be retained and will be removed to facilitate development

Tree No	Species	Cat	Stem Diameter mm	BS5837:2012 Radial Prot. Area m	BS5837:2012 Polygon Area m ²	Distance from Site Features (see key above)	Can Tree Be Retained (see key above)
1	Pedunculate Oak <i>Quercus robur</i>	A1	850 #	10.2	327	1m to existing drive access	YES (1)
2	Fig <i>Ficus carica</i>	B1 / C1	200 170	3.1	31	2m to access for mini digger	YES (1)
3	Hybrid Black Poplar <i>Populus euroamericana</i>	A1 / B1	870 #	10.4	342	9m to revamped layout for extension	YES (1)
4	Sycamore <i>Acer pseudoplatanus</i>	C1	430 #	5.2	84	8m to revamped layout for extension	YES
5	Cabbage Palm <i>Cordyline australis</i>	C1	180	2.2	15	UF of extension	NO-RTFD
6	Sycamore <i>Acer pseudoplatanus</i>	A1	650 650 #	11.0	382	9.4m to existing sunroom 10m to new extension	YES (1)
Grp 1	Silver Birch <i>Betula pendula</i> x 3 of	C2	100 150 270	1.2 1.8 3.2	5 10 33	1.5m to existing driveway	YES (1)

6.2 **NO – RSAM**

There are **0** trees within this category on this project which are recommended for removal for health and safety reasons regardless of any redevelopment proposals.

6.3 **NO – RTFD**

There is **1** tree within this category on this project which cannot be retained with the layout proposed.

Tree 5 Cabbage Palm – a small ornamental tree of small stature that can only be enjoyed from within the property and makes little impact in the landscape and is a tree of limited value and merit.

6.4 **YES**

There is **1** tree in this category on this project which can be retained and fully protected in accordance with BS5837 recommendations (see **Tree Protection Plan BJH.04** at [appendix BH4](#) and full listing in schedule at 6.1 above).

Tree 4 Sycamore - an off-site tree of limited merit being suppressed and dominated by the Hybrid Poplar.

6.5 **YES (1)**

There are **4** trees and **1** group in this category on this project where work will intrude into their RPA as listed at 6.1 above and as shown on the **TRR Plan BJH03** and thus require mitigation measures to be applied in order to provide adequate levels of root protection and ensure their survival :-

Tree 1 Pedunculate Oak and Group 1 Birches – these trees are located at the front of the property and well clear of development proposals but they have been included in case there is a need to utilise the front drive for materials storage and concrete mixing – the Method Statement allows for this.

Tree 2 Fig – this tree is located at the northern end of the house at the rear and is clear of the new extension but access arrangements mean that ground protection will be necessary across its RPA and its low branching habit will need to be addressed and pruning works undertaken - the Method Statement allows for this.

Tree 3 Hybrid Poplar & Tree 6 Sycamore – both are mature off site trees whose RPA's very marginally overlap the southernmost corner of the new extension and a combination of ground protection measures and hand digging will cater for this with minimal impact on the trees - the Method Statement allows for this.

7.0 TREE PROTECTION PLAN

- 7.1 The Tree Protection Plan (TPP) has been superimposed on the layout plan based on the topographical survey.
- 7.2 The plan clearly indicates the location of protective barriers to form a Construction Exclusion Zone around the retained trees.
- 7.3 The TPP has been annotated with descriptive text and a key and additional information prepared as a separate text document where necessary that must accompany the Plan at all stages e.g. when handed to the Site Manager.
- 7.4 Where there is a need for Ground Protection this has been clearly indicated and a specification provided for same.
- 7.5 The following is a list of factors that BS recommends need to be considered to avoid disturbance to the barriers during the construction process – some of these matters will have been dealt with in this report but in the event that there are issues that have not been satisfactorily resolved at this juncture it is suggested that the Planning Authority seek detailed responses as part of Method Statement submissions to satisfy Planning Conditions:-
 - a) site construction access; b) the intensity and nature of the construction activity; c) contractors car parking; d) phasing of construction works; e) the space needed for foundation excavations and construction works; f) the availability of special construction techniques; g) the location and space needed for all temporary and permanent apparatus and service runs, including foul and surface water drains, land drains, soakaways, gas, oil, water, electricity, telephone, television or other communication cables; h) all changes in ground levels, including the location of retaining walls, steps and making adequate allowance for foundations of walls; i) working space for cranes, plant, scaffolding and access during works; j) space for site huts, temporary toilet facilities (including their drainage) and other temporary structures; k) the type and extent of landscape works which will be needed within the protected areas, and the effects these will have on the root system; l) space for storing (whether temporary or long term) materials, spoil and fuel and the mixing of cement and concrete and m) the effects of slope on the movement of potentially harmful liquid spillages towards or into protected areas.

8.0 ARBORICULTURAL METHOD STATEMENT

- 8.1 At the Planning Application stage BS5837 requires that the arboriculturist is to identify any areas where the ability to achieve a successful outcome for retained trees on a development site can be defined.
- 8.2 On this project it will be critical to follow a carefully planned and phased form of development to avoid unnecessary damage to tree roots.
- 8.3 The following phased works are therefore recommended:-
- 8.3.1 Contractors vehicles will park off road utilising the existing access driveway which is of consolidated aggregate form – if it proves necessary to store materials in this area or to mix concrete or introduce a skip at either access point then a thick gauge plastic sheet must be laid across the drive to collect any spillage and prevent ground contamination.
- 8.3.2 Erect the protective fencing to the standards specified and as shown on Plan BJH 04.

The following prohibitions shall apply within the area enclosed by the Tree Protection Fencing :-

- **No** mechanical digging or scraping once the initial ground cover vegetation has been cleared and the site fenced off.
- **No** storage of plant, equipment or materials
- **No** vehicular or plant access
- **No** fire lighting
- **No** handling, discharge or spillage of any chemical substance, including cement washings
- **No** action likely to cause localised water-logging
- **No** change in ground levels

- 8.3.3 To provide access to the rear of the property for the mini digger to undertake demolition works the small brick wall will be removed and possibly the lean-to as well – every effort should be made to retain existing hard surfaced areas for as long as possible but if they have to be removed or other open ground areas utilised then the ground must first be protected in accordance with **BS5837:2012 – Section 6.2.3.3 b) – lay interlinked boards placed on top of a compression resistant layer e.g. 150mm of woodchip laid on top of a geotextile membrane.**
- 8.3.4 Prune the Fig tree (tree 2) by removing most of the trunk which grows out to the west side thus providing head clearance and access for both pedestrian and vehicular traffic. Then lay the same ground protection specified at 8.3.2 above across the whole of the rear of the property abutting the existing building and sunroom – as shown on Plan BJH 04. Carefully demolish the existing sunroom pulling it in on its own footprint and removing arising swiftly from site and not leaving them stockpiled. Once down to the floor slab break this out with hydraulic hammer attachments and remove arisings. The mini-digger and any other machinery must at all times operate over ground protection or existing hard surfacing. Once bared ground is exposed the ground protection measures must be increased to cover the intervening ground up to the outline of the new extension.
- 8.3.5 By means of arboricultural expert monitored ‘**hand digging with forks only and no spades**’ excavate a slit trench along the line of the new extension and if roots (25mm maximum diameter) are encountered they must be cleanly severed with bypass secateurs by the arb expert to avoid splitting and tearing or remaining roots. Once this has been undertaken the machinery may be re-introduced to the site to excavate the open trench footings but all ground protection must remain in place abutting the footings to protect the roots beneath – as illustrated on Plan BJH 04.
- 8.3.6 If a greater working area is required at the rear of the property then the vegetation layer of plants and shrubs will need to be skimmed off and the zone of ground protection increased as indicated on Plan BJH 04. Scaffolding can then be erected over the ground protection to facilitate construction works.
- 8.3.7 The protective fencing and ground protection must remain in place until all construction work has ceased and machinery removed from the site.

9.0 DEMOLITION AND CONSTRUCTION PHASES OF WORK – GENERIC METHOD STATEMENT

- 9.1 Not required on this project – see 8.0 above for specific requirements.

10.0 SITE MONITORING & SUPERVISION

- BS5837 recommends that wherever trees on or adjacent to a site have been identified on the tree protection plan as requiring special protection measures, there should be an auditable system of arboricultural site monitoring. This should extend to direct arboricultural monitoring whenever demolition/construction and development activity is to take place within or adjacent to any RPA.
- It is suggested that for all major sites the following phased approach should be observed, but on smaller sites this would be simplified subject to agreement with the Council :-
 1. Pre-commencement site meeting between the development teams arboricultural consultant and the site manager and client representative where the full extent of arboricultural supervision/monitoring can be agreed for the project and the requirements of the AIA report and Tree Protection Plan BJH.04 discussed. Please note that **IF** there is a Demolition Phase to the project then the demolition contractors representative would also need to attend to gauge the constraints which will be placed on vehicle movements by the requirement to have Demolition Phase Protective Fencing erected for the duration of their works.
 2. Employ a qualified and experienced Tree Contractor to carry out all tree pruning and felling works that have been agreed with the Council.
 3. Erect the Construction Phase Protective Fencing [or extend it out from the initial Demolition Phase fencing if applicable] and apply any Ground Protection measures as recommended in the AIA report and shown on the Tree Protection Plan BJH.04
 4. Schedule a second pre-commencement meeting between the development teams arboricultural consultant and the site manager and client representative where the location of the Protective Fencing can be verified [and any adjustments to same requested] and the suitability of the materials used can also be verified [i.e. are they 'fit for purpose']. Subject to this all meeting the recommendations of the AIA report and as shown on the Tree Protection Plan BJH.04 the site may be released to the Site Manager and a letter issued by the Arboricultural Consultant to the Council verifying satisfactory completion of the initial site set-up Tree Protection measures – probably accompanied by details of how the requirements for an ongoing auditable system of arboricultural site monitoring are to be met on this project.

11.0 LANDSCAPE DESIGN - SITE WORKS, LANDSCAPE OPERATIONS AND MANAGEMENT

11.1 As an arboriculturist my level of expertise does not extend to Landscape design which is a specialist area requiring expert input from a Landscape Architect with a detailed scheme to accompany the planning application – although on such a small scheme as this it is not required.

12.0 CONCLUSIONS

- This report covers the overall Methodology for detailed development of this site and recommends mitigation measures where necessary for the layout being proposed.
- The direct tree loss required to facilitate development as proposed is not significant at all - with only one small ornamental Palm tree needing to be removed and there will not be a need to plant a replacement for this tree.
- Provided that the methodology prescribed in this report is strictly adhered to I am of the opinion that the retained trees will readily cope with the levels of disturbance anticipated and survive the development works without adverse impact.