



ARBORICULTURAL METHOD STATEMENT

for

Mary Rose House, Woolston Road, Havant

*-prepared on behalf of **PMC Construction** –*

- May 2012-

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

ARBORICULTURAL METHOD STATEMENT

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1.0 INTRODUCTION & CLIENTS BRIEF

- 1.1 This project involves the demolition of the existing buildings known as Mary Rose House and construction of **twenty five** new residential units, with associated parking, garages, hard standing and soft landscaping. A new access point will be formed onto Woolston Road. The existing shared access drive will be closed off and converted to open space provision.
- 1.2 As part of this exercise the primary trees on and adjacent to the development works have been surveyed ([see at appendix BH1](#)) and will be referred to in this Method Statement.
- 1.3 I have been advised that there is currently no legal constraint in the form of a **Tree Preservation Order** relating to this site.
- 1.4 In advising my client I am duty bound to comply with ‘Best Practice’ industry guidelines and as this project was instigated prior to 30th April this will follow the recommendations contained in BS5837:2005 – Tree In Relation To Construction Recommendations – adopting the sequential approach illustrated in the Figure 1 Diagram summarizing planning for trees on development sites ([see at appendix BH1](#)).

2.0 DOCUMENT DISCLOSURE STATEMENT

- 2.1 A copy of the Land Survey Topographical drawing has been provided to me for the purposes of my work – **Solent Surveys – 1:200 – April 2012**
- 2.2 The finalised layout has been made available to me in hard copy format:–
Martin Ralph Group – Dwg. 11256 – RM _05 Rev G -1:200 at A1 – May 2012
- 2.3 I rely totally on the accuracy of these drawings.

3.0 LAND SURVEY & TREE SURVEY

- 3.1 A Land Survey Topographical drawing has been prepared and to the best of my knowledge this accords with the requirements of BS5837 as listed at Section 4 – *Paragraphs 4.1.1 to 4.1.5.*

3.2 The tree survey exercise was conducted on **24th April 2012** in accordance with the requirements of BS5837 as listed at Section 4 – *Paragraphs 4.2.1 to 4.3.7. and Cascade Chart Table 1* – a copy of the survey schedule can be viewed at [appendix BH1](#).

3.3 Additional Considerations –

- *BS5837 Para .4.4.1* – **I found no trees on site that might represent a serious hazard to life or property.**
- *BS5837 Para .4.4.2* – **There are no trees on site which are suitable candidates for transplanting.**
- *BS5837 Para .4.4.3* – **There are no veteran trees on the development site.**

4.0 TREE CONSTRAINTS PLAN – RPA & ABOVE GROUND CONSTRAINTS

4.1 The RPA for each surveyed tree and group has been calculated using the Tree Survey data and by reference to Table 2 of BS5837.

4.2 A copy of the RPA schedule can be viewed at [appendix BH2](#) and the data has been applied to the TCP prepared for this current scheme.

4.3 In compiling the data and applying it to the TCP full consideration has been given to BS5837 – *Paragraph 5.2.4 and items a) to e)*.

4.4 In this regard it is to be noted that in respect of item *e)* if trees and groups have crown spreads which exceed the specified RPA then this has been taken into account on the TPP for those trees which are to be retained and either an increased protection zone applied to encompass the crown or where deemed appropriate ‘*access facilitation*’ tree surgery works specified that will avoid unnecessary contact and damage from site traffic during the demolition and/or construction works.

5.0 ASSESSMENT OF TREE CONSTRAINTS –AIA & DESIGN ISSUES

5.1 At *Paragraph 6.2.2 of BS5837* there is a recommendation that ‘*Even if there are no trees on the site, areas for future planting should be plotted on the TCP and protected from damage, especially soil compaction due to construction activity, by the erection of barriers and/or ground protection. Where such pre –development protection is not implemented, prior remediation measures should be employed, such as soil ripping with a winged-tined plough or subsoil aeration.*’ In practice this is extremely difficult to implement and the best that can be hoped for is that the ground is adequately protected and then appropriate de-compaction, aeration and mulching undertaken at the completion of works during the soft landscaping works phase. The TPP may where appropriate indicate notional areas outside the RPA’s where appropriate ground protection measures might be implemented to protect the ground during the course of demolition and construction works in anticipation of subsequent new tree planting.

5.2 At Paragraph 6.2.3 of BS5837 there is a recommendation that the following matters are taken into consideration:-

a) The presence of tree preservation orders or conservation area protection.

- To the best of my knowledge there is not an extant **Tree Preservation Order** covering this site, but I have made no investigations of my own in this respect. However the governing factor at this stage will be BS5837 but the client is advised to verify that there are no legal constraints before actioning any work advised in this report.

b) The effect that development proposals may have on the amenity value of trees, both on and near the site.

- This scheme involves the loss of almost all of the existing trees of varying grades and condition. Some of these trees are of high grade and high amenity value but they cannot be retained with the layout that is proposed. Thus the success of this scheme will rest on the political will to see it happen and the quality of the soft landscaping scheme and mitigation tree planting proposals which accompany it.

c) The above and below ground constraints.

- Fully assessed and a management strategy devised – see Section 6 of this report for further information in this respect.

d) The construction of the proposed development.

- As shown on the planning layout drawings and detailed in Section 6.0 of this report.

e) Whether the design and/or construction of the proposed development can be modified to accommodate retention of trees that would otherwise be at risk or lost. This includes appropriate tree surgery works that acceptably mitigate adverse effects caused by trees.

- **NO** – this layout reflects my clients requirements to maximise the redevelopment potential of this site in order to make it a viable proposition.
- **Facilitation Pruning** – There will be some requirement for some minor and acceptable facilitation pruning on this project.

f) Infrastructure requirements, e.g. easements for underground or above ground services; highway safety and visibility splays; and other infrastructural provisions, such as substations, refuse stores, lighting, signage and CCTV requirements.

- The centre of the site will be free of any trees so there will be no conflict once within the site but the access will need to be assessed in more detail by other experts in terms of highway safety and visibility splays and if there is conflict then this will have to be dealt with as an addendum to satisfy a planning condition.
- However, NJUG 10 is included in the appendices for completeness and as a basis for further discussion, if required.

g) The end use of the space

- This is ultimately an issue for Planners to consider but in arboricultural terms there is significant tree loss to facilitate the project.

h) Whether tree loss resulting from the development proposals can be acceptably mitigated by new tree planting.

- There is limited scope for tree planting within the site itself and only small ornamentals can be accommodated in this region. The perimeter of the site offers scope for hedge planting and perhaps some limited planting of forest type trees that will offer separation and screening whilst not overpowering the garden areas and useable space. This will all be shown on the Landscape Master Plan as prepared by **Elizabeth Ford – Landscape Architect.**

5.3 Proximity of trees to structures

- This is to ensure that above ground the existing shade cast by the tree crowns is reasonable and acceptable and allowance has been made for their future growth and development without there being pressure to prune or fell or to impinge on useable space.
- In this instance the only retained trees are along the Woolston Road frontage and these are Norway Maples which compete in a linear fashion and as such have limited scope for further development.
- These trees are also positioned around the periphery of the site and high crowned or at sufficient distance from new Plots that they are unlikely to cause immediate problems and this will be further improved by undertaking the facilitation pruning works advocated.

6.0 ARBORICULTURAL METHOD STATEMENT & TREE PROTECTION PLAN

6.1 The finalised planning layout drawing has been provided 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.

6.2 The data is presented here in tabular format:-

Key: RSAM = Remove for sound arboricultural management reasons RTFD = To be removed to facilitate development UF of. = Under footprint of development TRANS = Transplant to an alternative location on site

Tree No	Species	Cat	S or M	Stem Diam mm	BS5837:2005 Min.Radial Prot. Zone m	BS5837:2005 Min.Root Prot. Area m ²	Distance from Site Features (see key above)	Can Tree Be Retained
Grp 1	Himalayan Cotoneasters <i>Cotoneaster frigidus</i>	B2	M	250	2.5	19.6	UF of buildings	NO – RTFD
1	Weeping Willow <i>Salix babylonica</i>	A1	S	660	7.9	197.1	UF of buildings	NO – RTFD
2	Silver Maple <i>Acer saccharinum</i>	B1	S	560	6.7	141.9	UF of buildings	NO – RTFD
3	Flowering Cherry <i>Prunus</i> species	R	S	210	n/a	n/a	n/a	NO – RSAM
Grp 2	Broad Leaved Cockspur Thorn <i>Crateagus 'Prunifolia'</i>	B2	S / M	160 to 180	1.9 1.8	11.6 10.2	UF of buildings	NO – RTFD
4	Silver Maple <i>Acer saccharinum</i>	A1	S	650	7.8	191.2	UF of buildings	NO – RTFD
5	Weeping Willow <i>Salix babylonica</i>	B1	S	450	5.4	91.7	UF of buildings	NO – RTFD
6	Flowering Cherry <i>Prunus</i> species	A1	S	550	6.6	136.9	UF of buildings	NO – RTFD
Grp 3	Himalayan Cotoneasters <i>Cotoneaster frigidus</i>	B2	M	200	2.0	12.6	2m to 3m to new buildings and hard surfacing Northern end of linear group will be UF of new buildings	YES part NO – RTFD

Tree No	Species	Cat	S or M	Stem Diam mm	BS5837:2005 Min.Radial Prot. Zone m	BS5837:2005 Min.Root Prot. Area m ²	Distance from Site Features (see key above)	Can Tree Be Retained
Grp 4	Norway Maples <i>Acer platanoides</i> x 29 of	B2	S	200 to 250	2.4 3.0	18.1 28.3	3m to 5m to new buildings and hard surfacing Two weaker trees will be removed to form a new access point Northern end of linear group will be UF of new buildings	YES part NO – RTFD
7	Grey Sallow <i>Salix cinerea</i>	C1	S	220	2.7	22.0	UF of buildings	NO – RTFD
8	Whitebeam <i>Sorbus aria</i>	A1	S	350	4.2	56.0	UF of buildings	NO – RTFD
9	Whitebeam <i>Sorbus aria</i>	A1	S	480	5.8	104.3	4m to path 7m to new building	YES (1)
10	Silver Maple <i>Acer saccharinum</i>	A1	S	500	6.0	113.1	13m to new building	YES
Grp 5	Silver Maples x 5 Weeping Willow	B2	S	400 to 600	4.8 7.2	72.4 162.9	Closest tree is 15m to new building	YES

6.3 **NO – RSAM**

- There is **1** tree within this category on this project:-

3 – Cherry – a very poor quality tree which would be removed for sound arboricultural management reasons regardless of any redevelopment proposals and as such does not form part of the consideration of losses related to the planning application and the development process.

6.4 **NO – RTFD**

- There are **7** trees and **4** groups in this category on this project - **1; 2; 4; 5; 6; 7; 8 & Groups 1; 2 and parts of 3 & 4** – these trees will all need to be removed in order to facilitate my clients desired layout .

1 – Weeping Willow – a mature tree of good shape and form and high A grading.

2 – Silver Maple – a mature tree of good shape and form and moderate B grading.

4 – Hazel - a mature tree of good shape and form and high A grading.

5 – Weeping Willow – a mature tree of good shape and form and moderate B grading.

6 – Cherry – a mature tree of good shape and form and high A grading.

7 – Grey Sallow – a middle aged tree of poor form and low C grading.

8 – Whitebeam – a mature tree of good shape and form and high A grading.

Grp 1 – Cotoneasters – a linear grouping of trees of moderate B grading.

Grp 2 – Cockspur Thorns – sporadic plantings of middle aged trees in the northwest corner of the site- of moderate B grading.

Grp 3 - Cotoneasters – a linear grouping of young trees of moderate B grading- the northern end of this line will be removed.

Grp 4 – Norway Maples - a linear grouping of young trees of moderate B grading- the northern end of this line will be removed.

6.5 **YES**

There is **1** tree and **3** groups which can be retained and fully protected in accordance with BS5837 recommendations (see Tree Protection Plan BH.03) :-

10 – Silver Maple – a mature tree of high A grading.

Grp 3 - Cotoneasters – a linear grouping of young trees of moderate B grading- the majority of which can be retained.

Grp 4 - Norway Maples - a linear grouping of young trees of moderate B grading- the majority of which can be retained.

Grp 5 – Silver Maples and a **Weeping Willow** – a grouping of mature trees of moderate B grading.

6.6 **YES (1)**

- There is **1** tree which can also be retained and afforded protection with the proviso that certain mitigation measures are required to ensure that this is adequate to see its health and vitality sustained :-

9 – Whitebeam - a mature tree of good shape and form and high A grading – there will be a need to undertake some facilitation pruning to accommodate scaffold erection and to maintain a safe clearance from the new building – in addition to this the new footpath is within the RPA and will need to be constructed of porous materials with minimal soil excavation works – it is suggested that the technical detail for this can be provided under an addendum report to satisfy a planning condition – phasing of operations will need to allow for initial laying of ground protection until completion of the main building works to Plot 16 when the side path can be laid out.

7.0 PRE-DEVELOPMENT TREE WORK and WORKING WITHIN THE RPA (Generic Precautions)

- 7.1 Undertake all tree removal work as listed in the Tree Works Schedule – [see appendix BH4](#).
- 7.2 The tree surgery specialist contractors are to be given clear guidelines and a remit that prohibits heavy plant (Lorries, Cranes and Work Platforms) tracking through the site within tree protection zones where there is no existing hard surfacing protection.
- 7.3 Where trees are to be felled in proximity to others that are to be retained it will be necessary to use special dismantling techniques to avoid both above and below ground damage, lowering sections to the ground in a careful manner with the aid of slinging ropes.
- 7.4 Unless otherwise specifically instructed - all cut wood and arisings are to be removed from site and safely disposed of.
- 7.5 Tree stumps within RPA's are to be ground out or retained in situ and **NOT grubbed out** to avoid damage to the root systems of retained trees.

8.0 CONSTRUCTION EXCLUSION ZONE: BARRIERS and GROUND PROTECTION

- 8.1 Protective fencing barriers are to be 'fit for purpose' and located exactly as specified on the [Tree Protection Plans BH03](#) and in full accordance with the recommendations contained within British Standard 5837:2005.

9.0 AVOIDING DAMAGE TO STRUCTURES BY TREES : DIRECT or INDIRECT ACTION

- 9.1 Buildings should be constructed to allow for future growth of existing; planted or self sown trees.
- 9.2 Direct damage can be caused by :-
 - a) the disruption of underground services and pipelines
 - b) displacement of underground services and pipelines
 - c) the impact of branches with the superstructure
 - d) structural failure of the tree

In this respect the Tree Survey exercise will have identified any trees within categories c) or d) and tree works advised accordingly to remedy risk.

Items a) and b) can be avoided by judicious design and careful placement of utility services and by adherence to Table 3 planting distances.

- 9.3 Indirect damage by root action causing the shrinkage or swelling of clay soils can be avoided by adherence to the new tree planting distances specified under Table 3 – see at [appendix BH6](#); and by having engineer designed foundations to accord with NHBC Standards.

10.0 DEMOLITION & CONSTRUCTION IN PROXIMITY TO EXISTING TREES

This project involves both a demolition and a construction works element and will need to be undertaken in a Phased manner:-

Phase 1 - Pre-Demolition/Construction Tree Works

- Undertake all approved pre-development tree work – [see appendix BH4](#).
- The tree surgery specialist contractors are to be given clear guidelines and a remit that prohibits heavy plant (Lorries, Cranes and Work Platforms) tracking through the site within tree protection zones.

Phase 2 – Pre-Demolition/Protective Fencing Works

- **The majority of damage to retained trees on development sites is caused at the Demolition Phase before any construction work takes place – it is therefore essential to impose a planning condition covering this phase of works.**
- There is to be a **pre-contract meeting with the Demolition Contractors representative** where the methodology will be spelled out and the importance of tree protection emphasised and copies of the Method Statement and plans handed over. None of the Demolition Contractors operatives should enter onto the site until they have attended an Induction Course (organised by the Contractors) where the methodology will be explained to them and the importance of tree protection and identifying the trees which are to be retained and protected at all costs. This will include instruction to machine operatives where swinging booms and hydraulic arms can cause all kinds of damage above ground if they come into contact with tree branches and trunks.
- It should be possible to erect the majority of the full specification protective fencing at the outset as shown on the Tree Protection Plan [included at appendix BH5](#) - **PRIOR TO SITE RELEASE TO THE DEMOLITION CONTRACTORS**. Which is in full accordance with the recommendations contained within British Standard 5837:2005- Figure 2. A copy of the Tree Protection Plan is to be pinned up in the temporary offices/mess hut on site for all site staff to see. The area within the construction exclusion zone is to be regarded as **sacrosanct** and the fencing shall not be taken down or relocated at any time without the prior written approval of the monitoring arboriculturist or local authority tree officer, unless this has already been agreed as part of the planning application consent process and is detailed in writing and shown on a plan. The fencing shall comprise of interlocked Weldmesh (Heras) panels (or agreed alternative which meets the BS5837 standards), well braced to resist impacts and securely attached to a scaffolding

framework by means of wires or scaffold clamps. It shall have top and bottom horizontal bars, with uprights set into the ground at no greater interval than 3m spacings. Angled bars shall be located behind the fencing to act as braces, these will be firmly clamped to the top rail and set into the ground braced as necessary; these shall be spaced at no less an interval than one brace per two panels.

- The location and quality of this fencing is to be verified by either the appointed arboricultural consultant or the local authority Tree Officer before any demolition works proceed.
- In the event that it is not possible to erect the full specification at any given location temporary Heras in concrete blocks with panels firmly wired and clamped together will be utilised.
- Heavy machinery is to operate as agreed either over existing hard surfacing or building footprint or outside of the Root Protection Area of trees.
- The methodology for demolishing the existing buildings will involve pulling the roof and walls inwards down into the area currently occupied by the building footprint in order to protect the retained trees. The process will involve removal of the footings to the current buildings and this must be done very carefully in order that tree roots are not damaged or destroyed in the process. Under no circumstances will materials be stored other than outside of the protective fencing line and this may require a process of ‘clearance as you go’ to avoid stockpiling and cramping operations.

Phase 3 – Pre-Construction/Protective Fencing Works

- Where this has not already been accomplished as part of the Demolition Phase replace the temporary fencing and erect the full protective fencing - to be located exactly as specified on the [Tree Protection Plan BH03](#) – see at [appendix BH5](#).
- The following prohibitions shall apply within the Construction Exclusion Zone 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
 - **No** construction of a hard surface

Phase 4 - Post Construction Landscaping Works

- General landscaping works are to be organised in accordance with the BS5837 extracts included [at appendix BH6](#).
- On completion of all building works and immediately prior to landscaping works being undertaken and with the agreement of the LPA Tree Officer the Protective Fencing may be removed and the area within opened up for soft landscaping and final surface treatments/fencing works.
- This is to be hand excavation works only with no machinery being used unless specific ground protection has been laid. Even then only lightweight mini excavators are to be permitted access.
- It is acknowledged that by the nature of the works some surface excavation is needed to prepare for tree and shrub planting or laying of lawns. This work shall be undertaken with hand forks and any exposed roots are to be cleanly severed to encourage new growth and an adequate soil medium laid around them to encourage same.

10.1 UTILITY SERVICE CONNECTIONS

- At the time of writing this Method Statement the exact route of underground service connections into the site is not known but is anticipated to follow the new access road into the site. It is not clear at this juncture how much of the existing utility service links can be made use of to avoid having to excavate new routes.
- In the interim a copy of NJUG 10 Guidelines is included ([at appendix BH6](#)) to assist with this.
- It is suggested in view of the fact that various experts will need to consult and agree on this matter that the technical detail is best dealt with as a Planning Condition requirement whereby the addendum report will need to be agreed prior to works being undertaken on site.

11.0 SOFT LANDSCAPING WORKS & MITIGATION/ENHANCEMENT TREE PLANTING WORKS

11.1 General Soft Landscape Works

- Any soft landscape works within the protected areas shall be in accord with Table 3 and Sections 13 & 14 of BS5837:2005.
- On completion of all building works and immediately prior to landscaping works being undertaken and with the agreement of the LPA Tree Officer the Protective Fencing may be removed and the area within opened up for soft landscaping and final surface treatments.
- At this juncture appropriate de-compaction, aeration and mulching should be undertaken on any areas designated for planting, which for practical operational reasons could not be fully protected during the build process.
- This is to be hand excavation works only with no machinery being used unless specific ground protection has been laid. Even then only lightweight mini excavators are to be permitted access.
- It is my understanding that a full and detailed Landscape Master Plan will be submitted with the Planning Application and this work is being carried out by Elizabeth Ford – Landscape Architect.

12.0 MONITORING & SITE SUPERVISION

- It is recommended in BS5837:2005 that either an arboriculturist or a person suitably experienced in the subject is retained to advise on all tree related aspects of site monitoring and supervision and it is the local authority's responsibility to make this a condition of planning approval with the said Condition ideally requiring a set schedule of operations and timings prior to undertaking works on site.
- In this instance I recommend at least two pre-start meetings – one prior to the Demolition Phase and the other prior to the Construction Phase - which should be held out on site with the Contracts Manager to inspect the protective fencing and ground protection measures to verify that they are fit for purpose and in the correct location according to the Tree Protection Plan.
- **In addition to this it will be necessary for the works to the following to be monitored on the day by an arboricultural expert:-**
 - 1. The path works adjacent to tree 9 - Whitebeam**
 - 2. The removal of tree to form the new access point.**
 - 3. Excavation for any new service links into the site.**
- Further meetings should be at monthly intervals for the duration of the works on site or as required by the Client to address any issues which may arise.

13.0 CONCLUSIONS

- This scheme does involve the unavoidable loss of a significant amount of moderate and high graded trees and groups from the centre of the site.
- There is scope for only a limited amount of mitigation planting within the red line area of the development site land.
- Given these circumstances there will need to be political will to see this project take place.