



ARBORICULTURAL METHOD STATEMENT for

15 Billett Avenue, Waterloo

-prepared on behalf of **Peter Ernest Homes Ltd.** –

3 Foxcombe Cottages - South Harting - West Sussex GU31 5PL

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1.0 INTRODUCTION & CLIENTS BRIEF

- 1.1 My client on this project is **Paul Harvey of Peter Ernest Homes Ltd.** who own the land at :- **15 Billett Avenue, Waterloooville**
- 1.2 The proposal is to redevelop this site and construct new residential dwellings with a new access road.
- 1.3 There are trees on this site that could be impacted by these proposals so I have been commissioned to consider and advise on all of the arboricultural aspects of this project and to then prepare a supporting AMS report to satisfy these planning requirements.
- 1.4 My work is to be compiled in accordance with the recommendations contained within BS5837:2012.

2.0 DOCUMENT DISCLOSURE STATEMENT

I have seen and studied the full set of Planning Drawings prepared by **Martin Ralph Architects** for this project and my tree survey work has been applied to both the existing site Topo plan and the proposed new layout – the AMS is based on the following drawing :-

- **Planning Drawing – Drawing Ref: 16A_071 005 Rev D 13.12.17 – 1:400 @A3**
- **Planning Drawing – Drawing Ref: 16A_071 010 Rev K 13.12.17 – 1:400 @A3**

these plans have been provided for the purposes of my work - I rely totally on their accuracy for tree locations; crown spreads & protective fencing.

3.0 TREE SURVEY & ROOT PROTECTION SCHEDULES & IMPACT ASSESSMENT

3.1 I visited the site on **8th March 2017** and carried out a tree survey exercise in accordance with BS5837:2012 recommendations.

Tree No.	Species	Ht m	Diam mm	Brch Sprd m	GC m	LS	Condition Comments	Preliminary Management Recommendations	Rem Con yrs	Cat
1	Goat Willow <i>Salix caprea</i>	8	500	N 4 E 2 S 4 W 6	2	M	Decay and cavities at ground level-bifurcated 1m above ground level-leans west side over neighbours boundary-previously heavily topped out-poor quality tree-half of tree has fallen to the north side	Fell and stump grind or grub out	<10	U
Grp 1	Leyland Cypress <i>Cupressocyparis leylandii</i>	10	Av 250	N 1 E 1 S 5 W 5	0	SM	The majority of the original grouping have been removed and others that remain have been topped out.	Fell and stump grind or grub out	<10	U
2	Common Ash <i>Fraxinus excelsior</i>	20	900 #	N 6 E 3 S 8 W 10	8	OM	Unable to access-off site tree-set down several metres lower at stream level-lower crowns crowded out by Conifers	No work considered essential at time of survey	30-40	B1
3	English Yew <i>Taxus baccata</i>	12	500 x 3	N 6 E 6 S 6 W 6	1	EM	Multi stemmed at ground level-tight forks with included bark-low crown density-some dieback-small and large diameter deadwood	Remove deadwood	>40	B1
4	Pedunculate Oak <i>Quercus robur</i>	20	1000 #	N 6 E 4 S 10 W 8	4	M	Unable to access-off site tree- ivy smothering base, trunk and through crown-small and large diameter deadwood and stubs-fair shape and form	Advise sever ivy-remove deadwood and stubs	>40	B1
5	Common Ash <i>Fraxinus excelsior</i>	8	350 #	N 7 E 4 S 4 W 4	1	SM	Ivy smothering base, trunk and through crown-unable to access due to garden debris strewn around basal area-crown weighted north-small and large diameter deadwood and stubs-previously heavily topped out-poor quality tree	Sever ivy	10-20	C1
Grp 2	Hazels <i>Corylus avellana</i> x 12 of	6	Av 100 x 5	N - E - S - W -	0	EM	Ivy smothering base, trunks and through crowns-older stems have died out-open splayed habit to new growth	Sever ivy and coppice to rejuvenate	20-30	B2
6	Sycamore <i>Acer pseudoplatanus</i>	16	700	N 8 E 10 S 5 W 5	4	M	Ivy smothering base, trunk and through crown-bifurcated 2m above ground level-leans heavily east out above neighbours garden-crown weighted east	Sever ivy-reduce and reshape by 30-40% on east side to compensate for lean	>40	B1
7	Common Lime <i>Tilia europaea</i>	23	650	N 7 E 5 S 3 W 5	2	M	Ivy smothering base, trunk and through crown-suckers-previously reduced and reshaped.	Sever ivy- remove suckers	>40	A1

8	Pedunculate Oak <i>Quercus robur</i>	20	900	N 6 E 7 S 8 W10	1	M	Small and large diameter deadwood and stubs-low branching habit-stunted by severe storm damage and half of crown and main leader on north side have failed leaving a-long open wound some 4m long with splits and decay in the wound	Climbing inspection required-suspect that new growth is undermined by decay-remove deadwood and stubs	20-30	C1
9	Pedunculate Oak <i>Quercus robur</i>	24	1150	N 7 E 10 S 5 W7	8	M	Ivy smothering base, trunk and through crown-bifurcated 6m above ground level-crown weighted east over neighbours-small diameter deadwood-large diameter deadwood and stubs-storm damaged which has stunted it and removed the central leader leaving a rugged open crown formation	Sever ivy	>40	A1
10	Common Ash <i>Fraxinus excelsior</i>	14	350	N 0 E 10 S 3 W3	8	SM	Suppressed by dominant Oak-heavily crown weighted east-poor quality tree-cannot develop fully at this location and will eventually have to be removed on safety grounds	No work considered essential at time of survey	10-20	C1
11	Pedunculate Oak <i>Quercus robur</i>	20	600	N - E - S - W-	12	EM	Completely smothered and dominated by Ivy-barely any live growth remaining	Fell and stump grind or grub out	<10	U
12	Pedunculate Oak <i>Quercus robur</i>	12	500	N 3 E 1 S 3 W5	2	SM	Ivy smothering base, trunk and through crown-low crown density-dead top and in decline	Fell and stump grind or grub out	<10	U
Grp 3	Hollies <i>Ilex aquifolium</i> x 2of	5	180	N 0 E 2 S 2 W3	0	SM	Ivy smothering base, trunks and through crowns-small and large diameter deadwood throughout-topped out-poor quality tree-may recover if deadwood and ivy were removed	Remove deadwood and sever ivy	10-20	C2
13	Common Beech <i>Fagus sylvatica</i>	25	800	N 7 E 7 S 7 W7	2	M	Small diameter deadwood-good shape and form	No work considered essential at time of survey	>40	A1
Grp 4	Common Ash x 2of Cherry x 1of	8	Av 250	N - E - S - W7	0	Y to SM	Poor quality trees Cherry-root plate lifted and fallen to west side Ash(front)-bifurcated at ground level-tight forks with included bark-severe lean west-crossing and rubbing stems Ash(rear)-contorted trunk-poor quality tree	Fell and stump grind or grub out	<10	U
Grp 5	Leyland Cypress x 5of	10	Av 200	N 2 E 2 S 2 W7	3	Y	Poor quality trees-have been topped out and heavily pruned back on east side over gardens plus lower branches removed to 3m above ground level	No work considered essential at time of survey	10-20	C2
14	Weeping Willow <i>Salix babylonica</i>	10	650	N 9 E 5 S 5 W7	1	EM	Ivy smothering base, trunk and through crown-bifurcated 2m above ground level-open splayed habit to crown-crown weighted north-small and large diameter deadwood -low branching habit-poor quality tree	Remove deadwood and stubs	10-20	B1

15	Black Walnut <i>Juglans nigra</i>	20	500	N 7 E 7 S 7 W7	4	EM	Ivy on base-small diameter deadwood throughout	Remove deadwood	>40	A1
16	Leyland Cypress <i>Cupressocyparis leylandii</i>	12	350	N 3 E 1 S 3 W4	2	SM	Ivy smothering base, trunk and through crown-previously heavily topped out-poor quality tree	Sever ivy	10-20	C1
17	Pedunculate Oak <i>Quercus robur</i>	20	1150	N 9 E 12 S 12 W5	5	M	Ivy smothering base, trunk and through crown-epicormics throughout in response to heavy pruning work-suppressed west side by Tree 18-small diameter deadwood-previously heavily reduced and reshaped	Sever ivy	>40	A1
18	Pedunculate Oak <i>Quercus robur</i>	18	750	N 5 E 2 S 7 W10	5	EM	Ivy smothering base, trunk and through crown-suppressed east side by Tree 17- previously reduced and reshaped	Sever ivy	30-40	C1
19	Pedunculate Oak <i>Quercus robur</i>	14	650	N 0 E 3 S 8 W3	5	EM	Ivy smothering base, trunk and through crown-bifurcated at 3m above ground level-open splayed habit-suppressed and totally dominated by Trees 17 and 18-poor quality tree	Sever ivy	10-20	C1
20	Common Ash <i>Fraxinus excelsior</i>	18	300	N 0 E 0 S 10 W0	4	SM	Ivy smothering base and trunk-significant lean to south-suppressed by the Oaks-poor quality tree	Fell and stump grind or grub out	<10	U
Grp 6	Common Ash <i>Fraxinus excelsior</i>	12 to 15	Av 400	N 4 E 4 S 4 W4	3	SM	Crown shape dictated by group pressure-merged crowns-small diameter deadwood throughout	No work considered essential at time of survey	10-20	C2
Grp 7	Leyland Cypress <i>Cupressocyparis leylandii</i>	12 to 15	Av 400	N 4 E 4 S 4 W4	0	SM	Several fallen trees-several rootplate lifted trees which will fall in due course plus others that have a significant lean	Fell and stump grind or grub out	<10	U
21	English Yew <i>Taxus baccata</i>	12	500 300 200	N 5 E 3 S 6 W6	1	EM	Unable to access-off site tree-ivy smothering base, trunk and through crown-multi stemmed at ground level-low crown density-small and large diameter deadwood throughout-stubs	Advise sever ivy-remove deadwood and stubs-remove Elder that is growing through it	>40	C1
Grp 8	Common Ash <i>Fraxinus excelsior</i>	12 to 14	200 to 400	N - E - S - W-	4	SM	Small diameter deadwood-all are self-seeded trees and majority are poor quality-have been crown lifted to 4m-there is one B grade tree of reasonable shape and form-fly tipping and soil/debris build-up on north side along old access drive.	No work considered essential at time of survey	20-30	C2

22	Crab Apple <i>Malus spp.</i>	6	75 x 2	N 5 E 1 S 1 W1	1	SM	Bifurcated at ground level-tight forks with included bark-leans north-suppressed by Ash trees-crown weighted north-poor quality tree	No work considered essential at time of survey	10-20	C1
23	Leyland Cypress <i>Cupressocyparis leylandii</i>	7	250	N 4 E 3 S 2 W3	2	Y	Suppressed and dominated by Ash trees-leans north-poor quality tree	No work considered essential at time of survey	10-20	C1
24	Common Ash <i>Fraxinus excelsior</i>	10	250	N 5 E 4 S 2 W3	3	Y	Multi stemmed 1.5m above ground level-poor quality tree-growing in amongst the stone retaining wall and engulfs two stones with callus root growth-precarious root hold	Fell and stump grind or grub out	<10	U
25	Common Beech <i>Fagus sylvatica</i>	12	190	N 4 E 0 S 0 W2	2	Y	Bifurcated 3m above ground level-open splayed form-suppressed-crown weighted north-poor quality tree	No work considered essential at time of survey	10-20	C1
26	Common Ash <i>Fraxinus excelsior</i>	14	200	N 3 E 3 S 3 W 3	3	Y	Ivy smothering base, trunk and through crown-self seeded tree	No work considered essential at time of survey	>40	C1

3.2 A Tree Root Protection Schedule has been prepared in accordance with BS5837:2012 recommendations (see Plans BJH 01 & 02 at [appendix BH2](#))

Tree No.	Tree Species	Cat	Diam mm	BS5837:2012 Table D1 Radial Protect. Zone m	BS5837:2012 Table D1 Root Protect. Area m ²	Is An Offset Required To Cater For Existing Rooting Pattern Restrictions
1	Goat Willow <i>Salix caprea</i>	U	500	n/a	n/a	NO – this tree would be removed for sound arboricultural management reasons regardless of any redevelopment proposals
Grp 1	Leyland Cypress <i>Cupressocyparis leylandii</i>	U	Av 250	n/a	n/a	NO – these trees would be removed for sound arboricultural management reasons regardless of any redevelopment proposals
2	Common Ash <i>Fraxinus excelsior</i>	B1	900 #	10.8	366	YES – roots will be severely restricted and contained by levels issues and concrete walls thus roots will not to any degree intrude across the boundary line into the site
3	English Yew <i>Taxus baccata</i>	B1	500 x 3	10.4	339	NO – fairly free rooting to all directions despite the levels issues
4	Pedunculate Oak <i>Quercus robur</i>	B1	1000 #	12.0	452	NO – fairly free rooting to all directions

5	Common Ash <i>Fraxinus excelsior</i>	C1	350 #	4.2	55	NO – fairly free rooting to all directions
Grp 2	Hazels <i>Corylus avellana</i> x 12 of	B2	Av 100 x 5	2.7	23	NO – fairly free rooting to all directions
6	Sycamore <i>Acer pseudoplatanus</i>	B1	700	8.4	222	NO – fairly free rooting to all directions
7	Common Lime <i>Tilia europaea</i>	A1	650	7.8	191	NO – fairly free rooting to all directions
8	Pedunculate Oak <i>Quercus robur</i>	C1	900	10.8	366	NO – fairly free rooting to all directions
9	Pedunculate Oak <i>Quercus robur</i>	A1	1150	13.8	598	NO – fairly free rooting to all directions
10	Common Ash <i>Fraxinus excelsior</i>	C1	350	4.2	55	NO – fairly free rooting to all directions
11	Pedunculate Oak <i>Quercus robur</i>	U	600	n/a	n/a	NO – this tree would be removed for sound arboricultural management reasons regardless of any redevelopment proposals
12	Pedunculate Oak <i>Quercus robur</i>	U	500	n/a	n/a	NO – this tree would be removed for sound arboricultural management reasons regardless of any redevelopment proposals
Grp 3	Hollies <i>Ilex aquifolium</i> x 2 of	C2	180	2.2	15	NO – fairly free rooting to all directions
13	Common Beech <i>Fagus sylvatica</i>	A1	800	9.6	290	NO – fairly free rooting to all directions
Grp 4	Common Ash x 2 of Cherry x 1 of	U	Av 250	n/a	n/a	NO – these trees would be removed for sound arboricultural management reasons regardless of any redevelopment proposals
Grp 5	Leyland Cypress x 5 of	C2	Av 200	2.4	18	NO – fairly free rooting to all directions
14	Weeping Willow <i>Salix babylonica</i>	B1	650	7.8	191	NO – fairly free rooting to all directions

15	Black Walnut <i>Juglans nigra</i>	A1	500	6.0	113	NO – fairly free rooting to all directions
16	Leyland Cypress <i>Cupressocyparis leylandii</i>	C1	350	4.2	55	NO – fairly free rooting to all directions
17	Pedunculate Oak <i>Quercus robur</i>	A1	1150	13.8	598	NO – fairly free rooting to all directions
18	Pedunculate Oak <i>Quercus robur</i>	C1	750	9.0	255	NO – fairly free rooting to all directions
19	Pedunculate Oak <i>Quercus robur</i>	C1	650	7.8	191	NO – fairly free rooting to all directions
20	Common Ash <i>Fraxinus excelsior</i>	U	300	n/a	n/a	NO – this tree would be removed for sound arboricultural management reasons regardless of any redevelopment proposals
Grp 6	Common Ash <i>Fraxinus excelsior</i>	C2	Av 400	4.8	72	NO – fairly free rooting to all directions
Grp 7	Leyland Cypress <i>Cupressocyparis leylandii</i>	U	Av 400	n/a	n/a	NO – these trees would be removed for sound arboricultural management reasons regardless of any redevelopment proposals
21	English Yew <i>Taxus baccata</i>	C1	500 300 200	7.4	172	NO – fairly free rooting to all directions
Grp 8	Common Ash <i>Fraxinus excelsior</i>	C2	200 to 400	2.4 4.8	18 72	NO – fairly free rooting to all directions
22	Crab Apple <i>Malus spp.</i>	C1	75 x 2	1.3	5	NO – fairly free rooting to all directions
23	Leyland Cypress <i>Cupressocyparis leylandii</i>	C1	250	3.0	28	NO – fairly free rooting to all directions
24	Common Ash <i>Fraxinus excelsior</i>	U	250	n/a	n/a	NO – this tree would be removed for sound arboricultural management reasons regardless of any redevelopment proposals

25	Common Beech <i>Fagus sylvatica</i>	C1	190	2.3	16	NO – fairly free rooting to all directions
26	Common Ash <i>Fraxinus excelsior</i>	C1	200	2.4	18	NO – fairly free rooting to all directions

4.0 IMPACT ASSESSMENT & TREE PROTECTION MEASURES RECOMMENDED

4.1 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 - the data is presented here in tabular format:-

Key: **NO-RSAM** = Remove for sound arboricultural management reasons **NO-RTFD** = Remove to facilitate development **UF** = under footprint of proposed development

YES = Yes can be retained and fully protected

YES (1) = Yes can be retained subject to mitigation measures being applied

Tree No	Species	Cat	Stem Diam mm	BS5837:2012 Radial Protection Area m	BS5837:2012 Polygon Area m ²	Distance from Site Features (see key above)	Can Tree Be Retained
1	Goat Willow <i>Salix caprea</i>	U	500	n/a	n/a	n/a – would be removed for sound arboricultural management reasons regardless of any redevelopment proposals	NO-RSAM
Grp 1	Leyland Cypress <i>Cupressocyparis leylandii</i>	U	Av 250	n/a	n/a	n/a – would be removed for sound arboricultural management reasons regardless of any redevelopment proposals	NO-RSAM
2	Common Ash <i>Fraxinus excelsior</i>	B1	900 #	10.8	366	In the bottom of the water course – has damaged concrete walls – will could be retained but by preference remove to facilitate full and long lasting repairs to the watercourse structure/culverted pipework	NO-RTFD
3	English Yew <i>Taxus baccata</i>	B1	500 x 3	10.4	339	For similar reasons it is proposed that this tree be removed and mitigation planting undertaken nearby - could be retained but by preference remove to facilitate full and long lasting repairs to the watercourse structure/culverted pipework	NO-RTFD
4	Pedunculate Oak <i>Quercus robur</i>	B1	1000 #	12.0	452	8m to closest part of walls of culverted watercourse 11m to area that will need to be demolished and re-built - The walls of the water course and competition for rooting space with other trees will have constrained the rooting pattern	YES
5	Common Ash <i>Fraxinus excelsior</i>	C1	350 #	4.2	55	17m to the walls of culverted watercourse 15m to closest part of excavation to repair the piped watercourse	YES
Grp 2	Hazels <i>Corylus avellana</i> x 12 of	B2	Av 100 x 5	2.7	23	7m to closest part of excavation to repair the piped watercourse	YES

Tree No	Species	Cat	Stem Diam mm	BS5837:2012 Radial Protection Area m	BS5837:2012 Polygon Area m ²	Distance from Site Features (see key above)	Can Tree Be Retained
6	Sycamore <i>Acer pseudoplatanus</i>	B1	700	8.4	222	16m to closest part of excavation to repair the piped watercourse	YES
7	Common Lime <i>Tilia europaea</i>	A1	650	7.8	191	1m to closest part of excavation to repair the piped watercourse – excavation work will inevitably undermine the stability and ongoing health and vitality of this tree	NO-RTFD
8	Pedunculate Oak <i>Quercus robur</i>	C1	900	10.8	366	6m to closest part of excavation to repair the piped watercourse – however this tree does not have a full crown having been heavily reduced following storm damage so the RPA will be less than that required for a full crowned mature tree – also has ecological merit so there is a desire to see it retained	YES (1)
9	Pedunculate Oak <i>Quercus robur</i>	A1	1150	13.8	598	16m to closest part of excavation to repair the piped watercourse	YES
10	Common Ash <i>Fraxinus excelsior</i>	C1	350	4.2	55	14m to closest part of excavation to repair the piped watercourse	YES
11	Pedunculate Oak <i>Quercus robur</i>	U	600	n/a	n/a	n/a – would be removed for sound arboricultural management reasons regardless of any redevelopment proposals	NO-RSAM
12	Pedunculate Oak <i>Quercus robur</i>	U	500	n/a	n/a	n/a – would be removed for sound arboricultural management reasons regardless of any redevelopment proposals	NO-RSAM
Grp 3	Hollies <i>Ilex aquifolium</i> x 2of	C2	180	2.2	15	16m to closest part of excavation to repair the piped watercourse	YES
13	Common Beech <i>Fagus sylvatica</i>	A1	800	9.6	290	13m to closest part of excavation to repair the piped watercourse	YES
Grp 4	Common Ash x 2of Cherry x 1of	U	Av 250	n/a	n/a	n/a – would be removed for sound arboricultural management reasons regardless of any redevelopment proposals	NO-RSAM
Grp 5	Leyland Cypress x 5of	C2	Av 200	2.4	18	11m to closest part of excavation to repair the piped watercourse	YES
14	Weeping Willow <i>Salix babylonica</i>	B1	650	7.8	191	UF of excavation works to repair the damaged culverted watercourse	NO-RTFD

Tree No	Species	Cat	Stem Diam mm	BS5837:2012 Radial Protection Area m	BS5837:2012 Polygon Area m ²	Distance from Site Features (see key above)	Can Tree Be Retained
15	Black Walnut <i>Juglans nigra</i>	A1	500	6.0	113	UF of excavation works to repair the damaged culverted watercourse	NO-RTFD
16	Leyland Cypress <i>Cupressocyparis leylandii</i>	C1	350	4.2	55	12m to closest part of excavation to repair the piped watercourse	YES
17	Pedunculate Oak <i>Quercus robur</i>	A1	1150	13.8	598	14m to closest part of excavation to repair the piped watercourse	YES
18	Pedunculate Oak <i>Quercus robur</i>	C1	750	9.0	255	14m to closest part of excavation to repair the piped watercourse	YES
19	Pedunculate Oak <i>Quercus robur</i>	C1	650	7.8	191	12m to closest part of excavation to repair the piped watercourse	YES
20	Common Ash <i>Fraxinus excelsior</i>	U	300	n/a	n/a	n/a – would be removed for sound arboricultural management reasons regardless of any redevelopment proposals	NO-RSAM
Grp 6	Common Ash <i>Fraxinus excelsior</i>	C2	Av 400	4.8	72	UF of excavation works to repair the damaged culverted watercourse	NO-RTFD
Grp 7	Leyland Cypress <i>Cupressocyparis leylandii</i>	U	Av 400	n/a	n/a	n/a – would be removed for sound arboricultural management reasons regardless of any redevelopment proposals	NO-RSAM
21	English Yew <i>Taxus baccata</i>	C1	500 300 200	7.4	172	5m to excavation works to repair the damaged culverted watercourse	YES (1)
Grp 8	Common Ash <i>Fraxinus excelsior</i>	C2	200 to 400	2.4 4.8	18 72	3m to new turning head and access drive	YES (1)
22	Crab Apple <i>Malus spp.</i>	C1	75 x 2	1.3	5	UF of new access drive	NO-RTFD
23	Leyland Cypress <i>Cupressocyparis leylandii</i>	C1	250	3.0	28	UF of new access drive	NO-RTFD
24	Common Ash <i>Fraxinus excelsior</i>	U	250	n/a	n/a	n/a – would be removed for sound arboricultural management reasons regardless of any redevelopment proposals	NO-RSAM

Tree No	Species	Cat	Stem Diam mm	BS5837:2012 Radial Protection Area m	BS5837:2012 Polygon Area m ²	Distance from Site Features (see key above)	Can Tree Be Retained
25	Common Beech <i>Fagus sylvatica</i>	C1	190	2.3	16	UF of new access drive	NO-RTFD
26	Common Ash <i>Fraxinus excelsior</i>	C1	200	2.4	18	UF of new access drive	NO-RTFD

4.2 **YES**

There are **10** individual trees and **3** groups in this category where work will be taking place outside of their RPA's and they can be fully protected in full compliance with BS5837:2012 recommendations.

Trees – **4 Oak; 5 Ash; 6 Sycamore; 9 Oak; 10 Ash; 13 Beech; 16 Leylandii; 17 Oak; 18 Oak and 19 Oak.**

Groups – **G2 Hazels; G3 Hollies and G5 Leylandii**

4.3 **YES (1)**

There are **2** individual trees and **1** group in this category on this project where work will be taking place within their RPA's as listed at 3.2 above but they can be safely retained provided that mitigation measures are applied as described in detail at Section 6 – under Site Specific Details.

Trees – **8 Oak and 21 Yew**

Groups – **G8 Ash**

4.4 **NO-RTFD**

There are **9** individual trees and **1** group of trees on this project which fall into this category and will be removed because they cannot be accommodated with this layout mostly due to the need to repair and replace the culverted watercourse pipe that traverses the site.

Trees – **2 Ash; 3 Yew; 7 Lime; 14 Weeping Willow; 15 Black Walnut; 22 Crab Apple; 23 Leylandii; 25 Beech and 26 Ash.**

Groups – **G6 Ash**

4.5 NO-RSAM

There are 5 individual trees and 3 groups of trees on this project which fall into this category and will be removed because they are of very poor quality and U graded meaning they have a short life expectancy (less than 10 years) and these trees would be removed for sound arboricultural management reasons regardless of any redevelopment proposals.

Trees – 1 Goat Willow; 11 Oak; 12 Oak; 20 Ash and 24 Ash.

Groups – G1 Leylandii; G4 Ash and G7 Leylandii.

5.0 PRE-DEVELOPMENT TREE WORKS

N.B. – These works are recommended not only to facilitate works but also to improve the shape and form of retained trees for the future.

No	Species	Tree Works Recommended
1	Goat Willow <i>Salix caprea</i>	- Fell to ground level in a controlled manner - Grub or grind out the stump
Grp 1	Leyland Cypress <i>Cupressocyparis leylandii</i>	- Fell to ground level in a controlled manner - Grub out the stumps
2	Common Ash <i>Fraxinus excelsior</i>	- Fell to ground level in a controlled manner - Leave stump in situ
3	English Yew <i>Taxus baccata</i>	- Fell to ground level in a controlled manner - Grub or grind out the stump
4	Pedunculate Oak <i>Quercus robur</i>	Off site tree – no works
5	Common Ash <i>Fraxinus excelsior</i>	Sever ivy at ground level
Grp 2	Hazels <i>Corylus avellana</i> <i>x 12 of</i>	- Remove ivy - Coppice close to ground level to rejuvenate
6	Sycamore <i>Acer pseudoplatanus</i>	- Sever the ivy at ground level - Reduce and reshape by 30%-40% (5m to 6.5m) on east side [ONLY] to compensate for the heavy lean across neighbouring gardens

7	Common Lime <i>Tilia europaea</i>	• Sever ivy at ground level • Remove suckers
8	Pedunculate Oak <i>Quercus robur</i>	• This is a Habitat tree with large holes; splits; and cavities in the upper crown zone that need to be inspected by climbing the tree and then prescribing works that are a balance between ecology and safety – but the overall aim will be to retain this tree. • Remove major deadwood and tidy storm damage as a basic requirement.
9	Pedunculate Oak <i>Quercus robur</i>	• Sever ivy at ground level
10	Common Ash <i>Fraxinus excelsior</i>	• No works considered essential at this time
11	Pedunculate Oak <i>Quercus robur</i>	• Fell to ground level in a controlled manner • Grind out the stumps to respect the root systems of surrounding trees
12	Pedunculate Oak <i>Quercus robur</i>	• Fell to ground level in a controlled manner • Grind out the stumps to respect the root systems of surrounding trees
Grp 3	Hollies <i>Ilex aquifolium</i> <i>x 2of</i>	• Remove deadwood • Sever the ivy at ground level
13	Common Beech <i>Fagus sylvatica</i>	• No works considered essential at this time
Grp 4	Common Ash <i>x 2of</i> Cherry <i>x 1of</i>	• Fell to ground level in a controlled manner • Grub out the stumps
Grp 5	Leyland Cypress <i>x 5of</i>	• No works considered essential at this time
14	Weeping Willow <i>Salix babylonica</i>	• Fell to ground level in a controlled manner • Grub out the stump
15	Black Walnut <i>Juglans nigra</i>	• Fell to ground level in a controlled manner • Grub out the stump
16	Leyland Cypress <i>Cupressocyparis leylandii</i>	• Fell to ground level in a controlled manner • Grub out the stumps
17	Pedunculate Oak <i>Quercus robur</i>	• Sever ivy at ground level

18	Pedunculate Oak <i>Quercus robur</i>	Sever ivy at ground level
19	Pedunculate Oak <i>Quercus robur</i>	Sever ivy at ground level
20	Common Ash <i>Fraxinus excelsior</i>	- Fell to ground level in a controlled manner - Grub out the stump
Grp 6	Common Ash <i>Fraxinus excelsior</i>	- Fell to ground level in a controlled manner - Grub out the stumps
Grp 7	Leyland Cypress <i>Cupressocyparis leylandii</i>	- Fell to ground level in a controlled manner - Grub out the stumps
21	English Yew <i>Taxus baccata</i>	- Remove ivy - Remove deadwood - Remove Elder bush that is growing up through the crown
Grp 8	Common Ash <i>Fraxinus excelsior</i>	Crown lift and trim back lateral spread on north side [ONLY] by up to 0.5m to clear route of new access drive
22	Crab Apple <i>Malus spp.</i>	- Fell to ground level in a controlled manner - Grub out the stump
23	Leyland Cypress <i>Cupressocyparis leylandii</i>	- Fell to ground level in a controlled manner - Grub out the stump
24	Common Ash <i>Fraxinus excelsior</i>	- Fell to ground level in a controlled manner - Grub out the stump
25	Common Beech <i>Fagus sylvatica</i>	- Fell to ground level in a controlled manner - Grub out the stump
26	Common Ash <i>Fraxinus excelsior</i>	- Fell to ground level in a controlled manner - Grub out the stump

6.0 METHOD STATEMENT

Generic

- 6.1 Undertake any tree works that are specified at Section 5.
- 6.2 Erect the protective fencing as specified under **BS5837 Section 6** as shown on the **Tree Protection Plan BJH03/04** at [appendix BH3](#). Barriers are to be 'Fit For Purpose' to exclude construction activity and must be maintained to ensure that they remain rigid and complete and in the original setting out positions. Lay ground protection as specified under **BS5837 Section 6.2.3.3a)** as shown on the **Tree Protection Plan BJH03/04** at [appendix BH3](#).
- 6.3 The area within the fenced off **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 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
- 6.4 It will be very important for any vehicle drivers to have undergone a pre-contract induction session where the trees to be retained are to be highlighted and the need for care and attention when working nearby with wide loads; tall loads; plant with swinging booms, jibs and counterweights (including drilling rigs) or slewing hydraulic arms to avoid contact with trunks or crowns.

Site Specific**6.5 Trees 2;3;7;14;15 & Grps 6 & 7 (half of)**

- Regardless of any redevelopment proposals for this site there is a requirement to replace the damaged and partially blocked underground culvert which traverses this site to standards applied by the Environment Agency (an application has been lodged with the EA to this effect).
- This will involve removing the existing headwall and rebuilding it on completion of replacement of the pipe.
- The pipe is several metres below ground and therefore the only way to get at it is with an open trench thus the listing of trees above will have to be removed to facilitate this work.
- Every effort is to be made to minimise the impact on retained trees 8 & 21 by Arb Expert supervised 'Hand Digging' ONLY within their RPAs.
- To this end it can be seen on plan BJH03 that there is provision to keep vehicular traffic working from the west side outside of tree RPA's and at 90 degrees to the retained trees along the northern boundary thus working in line with rooting and not transversely across the roots so that any disturbance can be kept to a minimum.
- Once the old pipe has been removed and the new one laid in the bottom of the trench the whole exposed trenching zone will be carefully covered back in with the soil that was removed – this will then form part of the rear gardens to the new dwellings.
- In mitigation for this a number of semi-mature sized trees will be planted in the gaps along the eastern boundary line – species will include Red Oak; Pedunculate Oak and Black Walnut.
- In addition to this a lot of Hazel; Holly; Yew and Laurel will be planted as understorey layer planting.

6.6 Trees 22; 23; 25 & 26

- These low value and poor quality trees will be removed to allow the access road to be formed.
- It is intended that the Ash tree which make up Grp 8 will be retained which means that there will be a need for the access road to be built on 'No Dig' porous cellular confinement system principles. Within the RPA of Grp8 only hand digging will be permitted.
- The procedure for laying of which will be :-
 1. Spray the surface vegetation layer with an approved selective weedkiller containing Glyphosate
– allow the necessary period for this to be absorbed by the root system
 2. Using Strimmers break down and shred the surface vegetation and then using hand operated rakes clear the surface layer - rake the surface as level as can be achieved and if necessary fill any voids with washed sand

3. Lay and peg out the porous geotextile membrane so that it has an overlap on each side – which can be trimmed at a later date.
4. Decide on the edging material to be applied to each side and pin/peg or haunch this in place.
5. Lay the cellular confinement material to fill the gap between each sides edging material and then fill the voids with washed large diameter aggregate – using a hand operated vibrating tamper lightly bed the materials down
6. Cover this surface with a geotextile membrane and over this apply a 30mm layer of washed sand.
7. Over this lay a course of porous brick setts and bed them down level onto the sand - using a hand operated vibrating tamper lightly bed the materials down
8. Apply topsoil up to the top of the raised edging materials on each side to ramp down to ground levels and leave the site safe with no ‘trips’.

6.7 **Phased Development**

- There are two distinct phases to the works on this site – Replace Culvert & Main Construction.
- Both require access via the currently overgrown strip of land off Billett Avenue and it seems logical that this area will need to be worked on to provide freedom of access for vehicular traffic.
- This will involve the removal of the trees listed above as requiring to be removed to facilitate same – none of which are of any landscape merit.
- As we are retaining the off-site Ash trees to the south this work will need to be carefully undertaken with the minimum of ground disturbance to achieve a level site and then immediately following this - either lay the finished ‘No Dig’ Porous Drive or lay interim ground protection measures to spread loadings and avoid root damage.

6.8 **Utility Services & Drainage & Lighting**

- All such connections will have to come in via the access drive.
- To avoid damage to trees in Grp 8 these will be positioned to the far north side of the driveway.

6.9 **Site Set Up/Delivery/Materials Storage/Works Compound/Site Office/Welfare Units**

- These facilities can readily be accommodated on areas outside of tree RPA’s.

7.0 SITE MONITORING & SUPERVISION

- 7.1 There may need to be a **Pre-Commencement Site Meeting** [PCSM] between the development teams arboricultural consultant and the clients builders to verify that the protective measures are in place before any work commences out on site.
- 7.2 There is a requirement for some ongoing Site Monitoring and Supervision of this project by an Arboricultural Expert when the work to form the access is being undertaken which will be one of the first operations carried out so that the ground is protected from subsequent vehicular movements.
- 7.3 The details of the PCSM works will be photographed by the Arb Expert and the following reporting procedures will be adopted :-
This is an example of the format for the **Site Monitoring Schedule** that would be prepared and updated after each site monitoring visit with copies going to the clients and the local planning authority:-

Schedule Of Site Monitoring & Supervision for – 15 Billett Avenue, Waterloooville

Notes:

- In accordance with the Arboricultural Impact Assessment & Method Statement Report & Tree Protection Plan Ref: 0884.bjh.Dec 17 & BJH 03 & BJH 04
- To satisfy LPA arboricultural related Conditions No's

Date of Inspection	Item	In Attendance	Notes/Observations From Inspection	Details Of Any Follow Up Action Required
tba	Pre-Commencement Meeting [Condition No....]	Council Tree Officer to be invited Bernie Harverson- Arbor. Expert [BH] + Site Construction Manager	• A joint site inspection was conducted and agreement reached that the Protective Fencing (Boundary Fencing) and Ground Protection measures were 'Fit For Purpose' and in the correct locations.	•
tba	Subsequent Site Inspections	Bernie Harverson- Arbor. Expert [BH] + Site Construction Manager	• Inspect the works being undertaken and establish a photographic record of same. • Report back to the Council on findings.	•

8.0 CONCLUSIONS

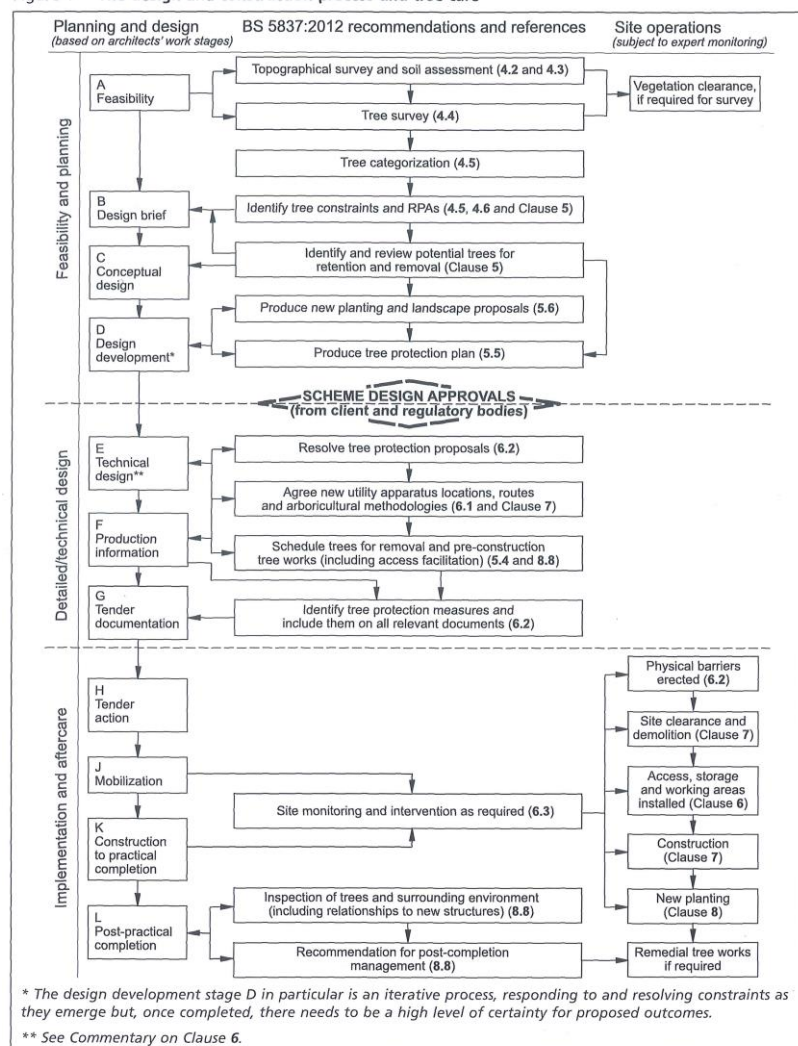
- All of the trees which are shown to be retained can be adequately protected by erecting Protective Fencing and applying mitigation measures as specified in this AMS report.
- There will be a loss of existing tree cover in the form of five trees and two groups (some of high and moderate grading) but this is beyond my clients control as it is required by the Environment Agency regardless of whether this site receives planning approval for the proposed development or not.
- In order to form the new access drive it will be necessary to remove four low C graded trees – but these are of poor quality and make a limited contribution in the landscape and can readily be mitigated by the amounts of planting proposed within the new layout. The southern boundary to the new drive will be densely planted up with shrubs and some selected trees to enhance the entrance to the site.
- In addition to this a significant amount of new tree planting is proposed throughout the site to mitigate the loss of the trees which will have to be removed to allow the new culverted watercourse to be formed.
- It is suggested that this can all be covered by a Planning Condition requiring compliance with this AMS report and also requiring submission and approval of a Landscape Master Plan detailing the tree and shrub planting works.



BH 1

Figure 1 - Flow Diagram
& Tree Survey Notes

Figure 1 The design and construction process and tree care



TREE SURVEY NOTES

These Tree Survey Notes have been prepared in accordance with the recommendations of **British Standard 5837:2012** and they define the criteria for pre –development tree surveys.

- Each tree/group/hedge/shelterbelt/woodland has been allocated a unique number (**No.**), where specifically requested and appropriate fees are agreed small durable numbered metal tags can be applied to each tree/group surveyed.
- The tree species (**Species**) is provided in both English and Latin name formats.
- Height assessments (**Ht**) are estimated in metres. This will be adequate for the majority of cases, but where accurate heights become a critical issue it may be necessary to return to site, as a separately commissioned exercise, to collect accurate measurements with the aid of optical instruments.
- Trunk/stem diameters (**Diam**) are measured in millimetres at 1.5m above ground level – where the tree is inaccessible the diameter is estimated as indicated by suffix #
- Radial crown spread assessments (**Brch Sprd**) are estimated in metres from the centre of the trunk/group to each of the four primary points of the compass (**N**-north; **E**-east; **S**-south and **W**-west) in order to achieve a representation of the crown shape which will be shown on the accompanying tree survey plan. These provide a general guide as to the main bulk outline of a tree/groups crown but are not tape measured dimensions. These would only be undertaken as part of a separately commissioned exercise, where precise dimensions are critical to the project at hand.
- Both the canopy ground clearance (**GC**) and the height & compass direction of the lowest major branch (**LMB**) are estimated and shown in metres
- An assessment of a tree/groups 'life stage' (**LS**) is made in terms of its site specific maturity as part of the surrounding landscape, taking into account its overall shape and form in that setting, and is recorded thus :-
Y - Young tree/group; **SM** - Semi-Mature tree/group; **EM** - Early-Mature tree/group;
M – Mature tree/group; **OM** - Over – mature tree/group
- Data on the structural condition (**Condition Comments**) of the tree/group is provided to give its visual appearance and any significant health and safety issues.
- Details of any recommended tree works required at the time of survey is given under the heading – **Preliminary Management Recommendations**.
- An estimate of a tree/groups remaining contribution in years (**RC**) is made and is recorded thus :-
0-5; 5-10; 10-20; 20-30; 30-40 or **>40** years.
- The category grading (**Cat**) for each tree/group is assessed according to the criteria provided within **BS5837:2012**. The assessment is made of the tree/group in its current condition and within the environment encountered bearing in mind its suitability for retention as part of any future proposed

development; although the exact layout detail of any specific scheme will not be known at the time of surveying. The trees have been classified into one of four categories and colour coded as BS5837 recommends :- **U** (dark red); **A** (light green); **B** (mid-blue) and **C** (grey). Please note that suffixed numerical sub-categories are also applied for guidance only and do not carry any cumulative or increased value for the tree/group. This colour coding scheme will be applied to all drawings provided.

Table 1 – Cascade chart for tree quality assessment

Category and definition	Criteria			Colour on plan
Trees unsuitable for retention				
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 (i.e. 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 NOTE Category U trees can have existing or potential conservation value which it might be desirable to preserve.			Dark Red
Trees to be considered for retention				
	Criteria – Subcategories			
	1	2	3	
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)	Light Green
Category B Trees of moderate quality with an estimated remaining life expectancy of at least 20 years	Trees that might be included in the 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	Mid Blue
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	Grey



BH 2

Tree Survey & Root Protection Plans

BJH 01/02



BH 3

Tree Retention & Protection Plan BJH 03/04

- + BS5837 Figure 2 & 3
- + 'No Dig' Examples

Figure 2 Default specification for protective barrier

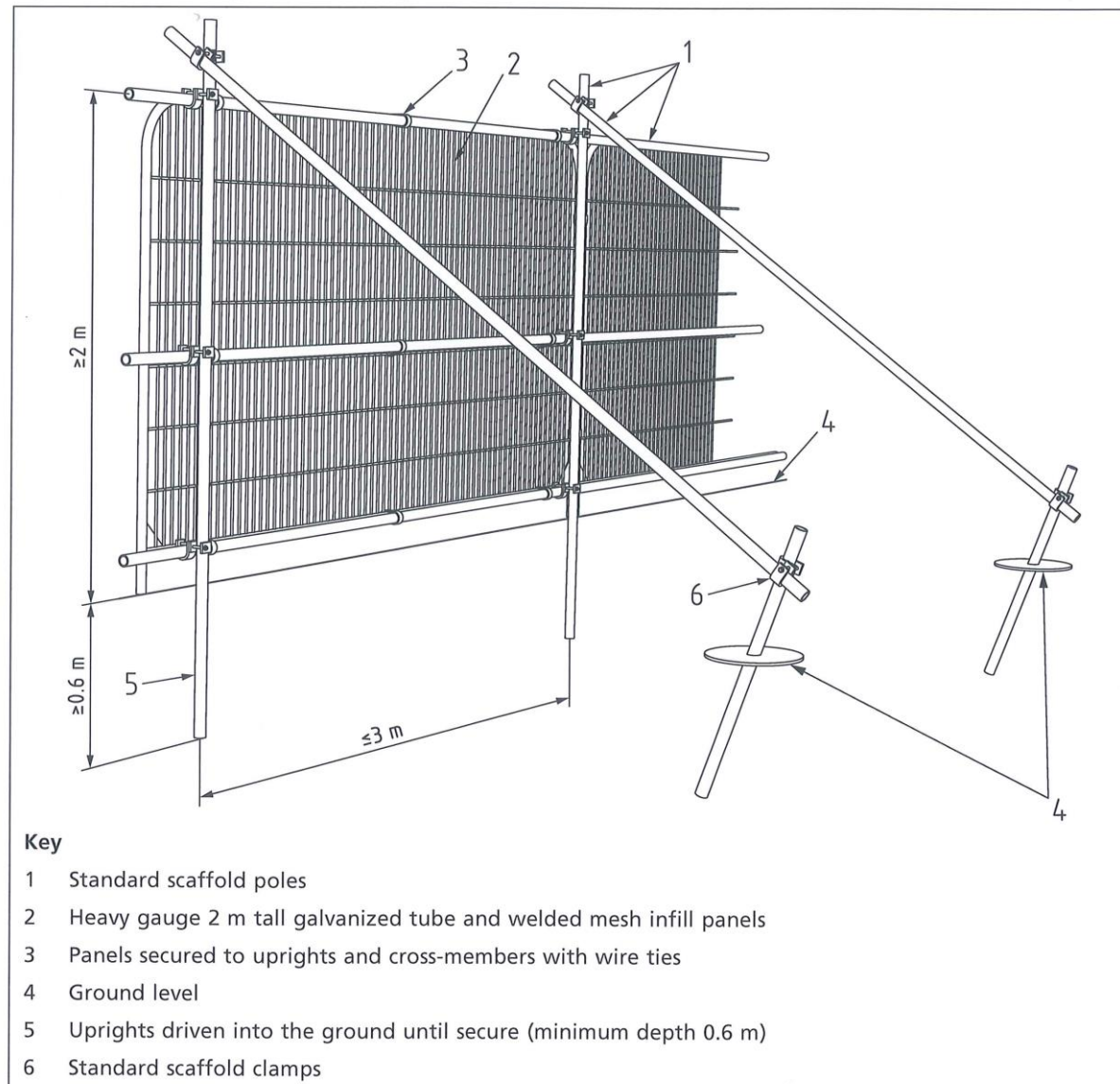
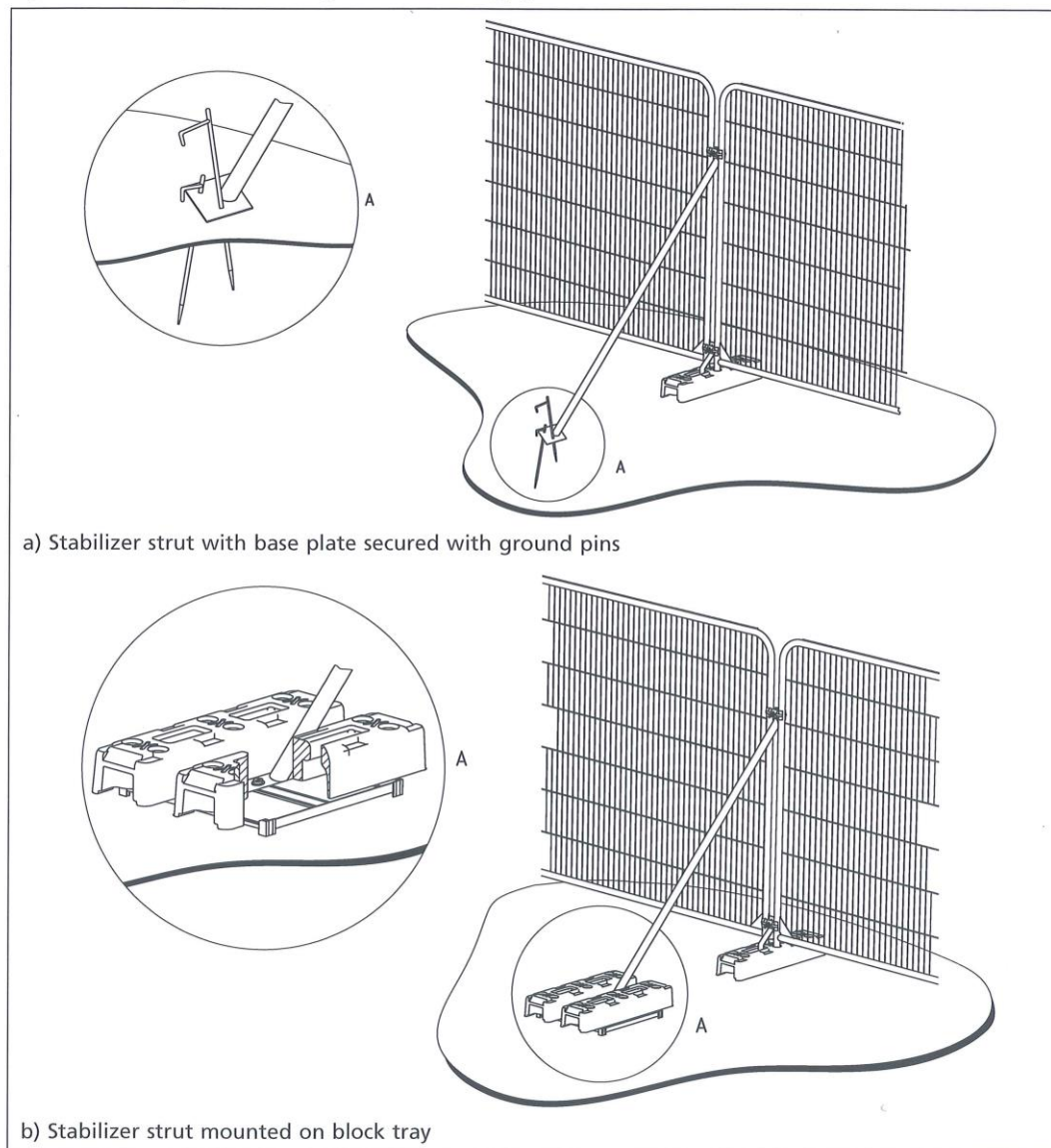


Figure 3 Examples of above-ground stabilizing systems





BH 4

Qualifications & Experience



QUALIFICATIONS AND EXPERIENCE

- My name is Bernie Harverson and I am a self employed independent arboricultural consultant in private practice. I take instructions primarily in the South of England but also on occasions work nationwide and abroad and have offices at : –
3 Foxcombe Cottages, South Harting, West Sussex GU31 5PL and at Cedar Court, 5 College Street, Petersfield GU31 4AE
- I hold the following arboricultural qualification – **National Diploma in Arboriculture** (Royal Forestry Society – 1976)
- I have **forty seven** years of practical and managerial experience in the arboricultural industry including periods in both the public and private sectors.
- My Local Government sector experience comprises one year as a tree surgeon with Brighton Parks and nine years spent in Arboricultural Officer posts with both Westminster City Council and Portsmouth City Council
- My past practical experience in the private sector includes two years at Tilhill Forest Nursery and over ten years for various companies as a Climbing Arborist/Tree Surgeon.
- Managerial work in the private sector includes two years as manager of Beechings Tree Surgeons and twelve years with the CBA Tree Consultancy Practice as Managing Director and Senior Arboricultural Consultant.
- As an independent self employed Arboricultural Consultant [since 2005] I now provide a comprehensive range of services including :-
tree surveys, appraisals, assessments and inspections with particular reference to planning and development and tree safety audits with a service offered as a climber to undertake full climbing inspections to better understand the condition of a given tree before prescribing a management strategy.
- I also undertake litigation work appearing as an Expert Witness in Court Actions and at Planning Appeals, Hearings and Local Inquiries.

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