

TREE SURVEY SCHEDULE FOR ARBORICULTURAL IMPACT AND PROTECTION APPRAISAL							
Site:	The Bowling Green, Brockhall Village, Old Langho, Lancashire						
Client:	Oakworth Homes Ltd						

Surveyor:	Phill Harris – Chartered Arboriculturist
Survey Date:	11 March 2013
Job Reference:	BTC454

Page: 1 of 3

No.	Species	Height	Stem Diam.	Branch Spread		Branch & Canopy Clearances	Life Stage	PC	General Observations and Comments	Management Recommendations	ERC	Cat. Grade	RPA (m²)	RPA Radius (m)
T1	Holly	10.5	280	N	3.5	N/A 2	EM	M	▪ Located outside site boundaries and therefore under third party ownership. ▪ Growing below crown of T2. ▪ Slightly sparse foliage cover and slightly small leaves in upper crown.	▪ Ensure protection of Root Protection Area (RPA) throughout development.	10+	C1	35	3.36
			E	2.5										
			S	3										
			W	2.5										
T2	Ash	18	570	N	5	4.5-S 2.5	EM	G	▪ Located outside site boundaries and therefore under third party ownership. ▪ Moderate amount of dead wood to approximately 20mm diameter. ▪ Adventitious shoot growth to topside of several branches. ▪ Several occluded pruning wounds to stem and branches.	▪ Ensure protection of RPA throughout development.	40+	B1/2	147	6.84
			E	7										
			S	9										
			W	6.5										
T3	Purple Plum	9	400	N	4	1.7 1	PM	G	▪ Stem divides into multiple primary branches at a height of approximately 1.5m with several included bark unions. ▪ Growing partially below crown of T2.	▪ Remove in order to construct development as proposed. ▪ Grind out stump to approximately 0.4m below ground level.	10+	C1/2	72	4.8
			E	3.5										
			S	4										
			W	4.5										
T4	Purple Plum	9	460	N	4	1.5 0	PM	G	▪ Stem divides into multiple primary branches at a height of approximately 1.5m with several included bark unions.	▪ Remove in order to construct development as proposed. ▪ Grub out stump.	10+	C1/2	96	5.52
			E	7										
			S	2.5										
			W	5										
T5	Purple Plum	8.5	410	N	2	1-N 1	PM	M	▪ Stem divides into multiple primary branches at a height of approximately 1.5m with several included bark unions. ▪ Several areas of decay at this point, evidently resultant of previous branch failures. ▪ Short projected remaining safe life expectancy.	▪ Remove due to poor structural condition. ▪ Grub out stump.	<10	U	76	4.92
			E	4										
			S	5.5										
			W	4.5										
T6	Wild Cherry	12	550	N	6.5	1.6 1	PM	G	▪ Stem bifurcates into primary branches at a height of approximately 1.6m. ▪ Moderate to severe curvature of several primary branches.	▪ Remove in order to construct development as proposed. ▪ Grub out stump.	10+	C1/2	137	6.6
			E	6.5										
			S	6.5										
			W	6.5										

Headings and Abbreviations:

No.	Allocated sequential reference number - Tree ('T'), Group ('G'), Woodland ('W') or Hedge ('H') reference number - refer to plan and to numbered tags where applicable
Species:	Common name
Height:	In metres, to half nearest metre – where possible approximately 80% are measured using an electronic clinometer and the remainder estimated against the measured trees. In the case of Groups and Woodlands the measurement listed is that of the highest tree
Stem Diam.:	Stem diameter in millimetres, to nearest 10mm - measured and calculated as per Annex C of BS5837:2012. MS = multi-stemmed, TS = twin-stemmed
Branch Spread:	Crown radius measured (or estimated where considered appropriate) from the four cardinal points (north, east, south and west) to give an accurate visual representation of the crown
Branch & Canopy Clearances:	Existing height above ground level, in metres, of first significant branch and direction of growth (e.g. 2.5-N) and of canopy at lowest point – to inform on crown to height ratio, potential for shading, etc.
Life Stage:	Estimated age class - Y = young, SM = semi-mature, EM = early-mature, M = mature, PM = post-mature
PC:	Physiological Condition - a measure of the tree(s)' overall vitality, i.e. D = Dead, MD = Moribund, P = Poor, M = Moderate, G = Good
General Observations and Comments:	Comments relating to the tree(s)' overall condition and any other pertinent factors including structural defects, current and potential direct structural damage, physiological decline, poor form, etc.
Management Recommendations:	Either Preliminary or In Consideration of the Proposal - In the case of Arboricultural Constraints Surveys the recommended management works only take existing site and tree circumstances and conditions into account and not proposed developments. Arboricultural Impact Assessment and Method Statement related Surveys take the proposed development into consideration with recommendations made accordingly. More than one option may be given if considered appropriate
ERC:	Estimated Remaining Contribution - in years as per BS5837:2012 (i.e. <10, 10+, 20+, 40+)
Cat. Grade:	Category Grading - tree retention value listed as U, A, B or C - in accordance with BS5837:2012 Table 1
RPA m²:	Root Protection Area in m² - calculated area around the tree that must be appropriately protected throughout the development process in order avoid root damage
RPA Radius (m):	Root Protection Area Radius - in metres measured from the centre of the stem to the line of tree protection
# (Estimated Dimensions):	Where trees are located off-site, or are inaccessible for any other reason, and accurate measurements or other information cannot be taken then the information provided is estimated and is duly suffixed with a “#” symbol

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T7	Purple Plum	7.5	6x180 (ms)	N E S W	4 4 3 3	1.2 0.5	PM	M/P	- Stem divides into multiple primary branches at a height of approximately 1.2m. - One of these primary branches has died back and is covered in fungal fruiting bodies. - Short projected remaining safe life expectancy.	- Remove due to short projected remaining safe life expectancy. - Grub out stump.	<10	U	88	5.29
T8	Sargent Cherry	9.5	530	N E S W	6 6 5 3	2-E 1.5	PM	G	- Stems divide into multiple primary branches at a height of approximately 2.0m, at point where evidently tree was evidently originally bottle grafted. - Several bacterial cankers to secondary branches. - Slightly biased crown to north-east due to partial suppression by neighbouring tree T9.	- Remove in order to construct development as proposed. - Grub out stump.	10+	C1/2	127	6.36
T9	Common Alder	13	610	N E S W	7 5 6 5.5	2.5-N 1.5	M	P	- Number of well established adventitious shoots to base. - Crown showing signs of a substantial reduction in vitality.	- Retain in context of proposed development. - Ensure protection of RPA throughout works. - Carry out ground improvement works within RPA on completion of development using Airspade.	10+	C1	168	7.32
T10	Purple Plum	8	430	N E S W	3.5 6.5 4 4.5	0.5	PM	M	Stem divides into multiple primary branches at a height of approximately 1.5m with several included bark unions.	- Retain in context of proposed development. - Ensure protection of RPA throughout works.	10+	C1/2	84	5.16
G1	2no. Leyland Cypress	≤ 5.5	≤ 3x140 (ms)	N E S W	≤ 1 ≤ 1.5 ≤ 1.5 ≤ 1.5	N/A ≥ 0	Y	G	- Loose group. - One tree has two stems, whilst the second is multi-stemmed. - Very low landscape value.	- Remove in order to construct development as proposed. - Grub out stumps.	10+	C1/2	≤ 27	≤ 2.91
G2	approx. 7no. Horse Chestnut, 6no. Sycamore, 8no. Lime, 2no. Ash, 2no. Common Alder, 1no. Sycamore	≤ 22	≤ 720	N E S W	≤ 8 ≤ 9 ≤ 8.5 ≤ 7	N/A ≥ 0.5	SM-M	M/P- G	- Moderately closely spaced group close to road frontage forming part of wider group which traverses property boundary, extending to neighbouring nursery land. - Group confers a high landscape value. - Several Horse Chestnuts have signs of infection by bark killing disease and one has extensive bark loss. - Of a relatively uniform age group and new planting therefore necessary in order to ensure long-term continuity.	- Retain in context of proposed development. - Ensure protection of RPA throughout works. - Monitor vitality of Horse Chestnuts. - Infill plant new Lime trees within available spaces throughout group. - Prune to lift crowns to obtain a ground clearance of approximately 3m to southern/eastern edge of group where necessary. - Carry out risk assessment appraisal.	40+	A2	≤ 235	≤ 8.64
G3	approx. 4no. Portugal Laurel	≤ 6.5	≤ 9x60 (ms)	N E S W	≤ 4 ≤ 4 ≤ 4 ≤ 4	N/A ≥ 0	M	G	- Group made up of two sections. - All multi-stemmed from ground level, low landscape value.	- Remove in order to construct development as proposed. - Grub out stumps.	10+	C1/2	≤ 15	≤ 2.16

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H1	Privet	≤ 2.5	≤ 9x30 (ms)	≤ 1.5 wide	N/A N/A	SM	G	▪ Maintained hedge around bowling green.	▪ Remove section to northwest in order to construct Plot One, as proposed. ▪ Grub out stumps. ▪ Retain remainder.	40+	C1/2	N/A	≤ 1.08

BS5837:2012 Table 1 – Cascade Chart for Tree Quality Assessment

Category and definition	Criteria (including subcategories where appropriate)			Identification on plan
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 BS5837:2012 paragraph 4.5.7.</i>			Red
	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)	Green
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	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 150 mm	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

DISCLAIMER

Survey Limitations: Unless otherwise stated all trees are surveyed from ground level using non-invasive techniques, in sufficient detail to gather data for and inform the design of the current project only. The disclosure of hidden crown and stem defects, in particular where they may be above a reachable height or where trees are ivy clad or in areas of ground vegetation, cannot therefore be expected. All obvious defects, however, are reported. Detailed tree safety appraisals are only carried out under specific written instructions. Comments upon evident tree safety relate to the condition of said tree at the time of the survey only.

Unless otherwise stated all trees should be re-inspected annually in order to appraise their on-going mechanical integrity and physiological condition. It should, however, be recognised that tree condition is subject to change, for example due to the effects of disease, decay, high winds, development works, etc. Changes in land use or site conditions (e.g. development that increases access frequency) and the occurrence of severe weather incidents are also significant considerations with regards tree structural integrity and trees should therefore be re-assessed in the context of such changes and/or incidents and inspected at intervals relative to identified and varying site conditions and associated risks.

Where trees are located wholly or partially on neighbouring private third-party land then said land is not accessed and our inspection is therefore restricted to what can reasonably be seen from within the site. Stem diameters of trees located on such land are estimated. Any subsequent comments and judgments made in respect of such trees are based on these restrictions and are our preliminary opinion only. Recommendations for works to neighbouring third-party trees are only made where a potentially unacceptable risk to persons and/or property has been identified during our survey or, if applicable, where permissible works are required to implement a proposed development. Where significant structural defects of third-party trees are identified and associated management works are considered essential to negate any risk of harm and/or damage then we will first attempt to inform the site occupier of the issues and, if not possible, then inform the relevant Council. Where a more detailed assessment is considered necessary then appropriate recommendations are set out in the Tree Survey Schedule.

Where tree stem locations are not included on the plan(s) provided then they are plotted at the time of the survey using, where appropriate and/or practicable, a combination of measurement triangulation and GPS co-ordination. Where this is not possible then locations are estimated. Restrictions in these respects are detailed in the report.

The potential influence of trees upon buildings or other structures resulting from the effects of their roots abstracting water from shrinkable load-bearing soils is not considered herein. The advice of a structural engineer must be sought with regard to appropriate foundation depths for new buildings, with reference to NHBC Standards Chapter 4.2 (NHBC, 2008).

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- TEMPORARY PROTECTIVE FENCING SPECIFICATION -

Construction Exclusion Zones (CEZs), enclosed by **Temporary Protective Fencing**, as detailed below and to be agreed with the Local Planning Authority (LPA), shall:

1. be retained in place throughout the development process, as specified in the 'Temporary Protective Fencing Construction' section below and detailed in BS5837:2012 Figure 2 (overleaf);
2. be sited in the area defined on the Tree Protection Plan (TPP);
3. be erected prior to any construction, demolition or excavation works and remain in place for the duration of the project;
4. preclude any delivery of site accommodation and/or materials and/or plant machinery;
5. preclude all construction related activity, with the sole exception of specified arboricultural works and any other works to be carried out under supervision that have been agreed by all parties; and
6. preclude the storage of all development related materials and substances including fuels, oils, additives, cement and/or any other deleterious substance.

Any incursion into CEZs must be by prior arrangement, following consultation with the LPA.

Temporary Protective Fencing Construction

1. Temporary protective fencing panels shall be weldmesh "Heras" panels of at least 2.0 metres in height.
2. The panels shall butt together and be securely fixed to a scaffold framework, as per 3 to 5 below.
3. The scaffold framework shall comprise of upright poles of at least 3.0 metres in length driven no less than 0.6 metres into the ground at maximum 3.0 metre centres with horizontal and diagonal poles fixed to the uprights, as per 4 to 5 below.
4. The two horizontal rail poles shall be attached to the uprights at heights of 0.6 and 1.8 metres with 3 no. clamps to each joint.
5. The diagonal scaffold pole struts be clamped to the top rail of the scaffold framework at a 45° angle and extend back into the CEZ and clamped to a 0.7 metre length of scaffold tube that shall be driven no less than 0.5m into the ground.
6. No fixing shall be made to any tree and all possible precautions shall be taken to prevent damage to tree roots when locating posts.
7. A 600mm x 300mm warning sign reading "TREE PROTECTION AREA KEEP OUT" (see Figure 1, below) shall be fixed to every 10.0 metre length of protective fencing.
8. On completion and prior to any demolition or construction works, site preparation, excavation or delivery of plant and materials, the Consulting Arboriculturist shall inspect the Temporary Protective Fencing.

Figure 1: CEZ Warning Sign

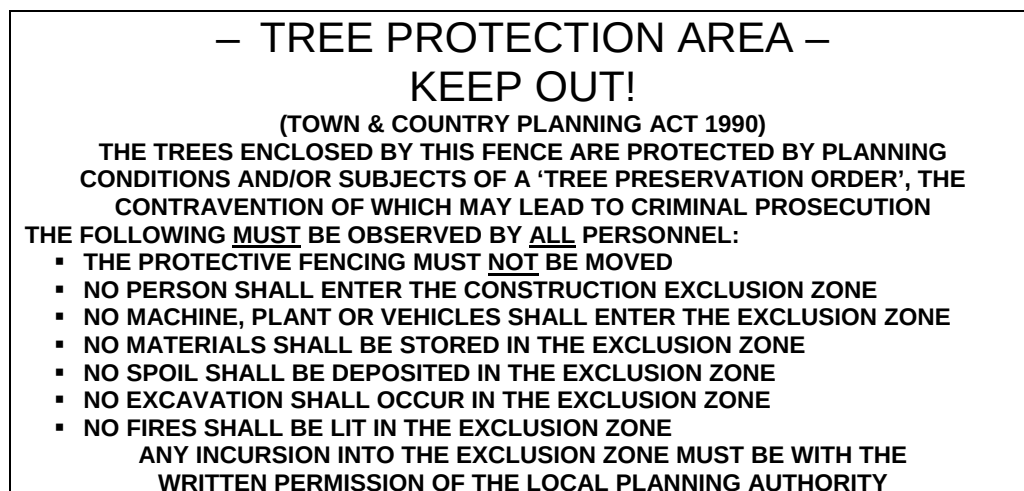


Figure 2: BS5837:2012 Default specification for protective barrier

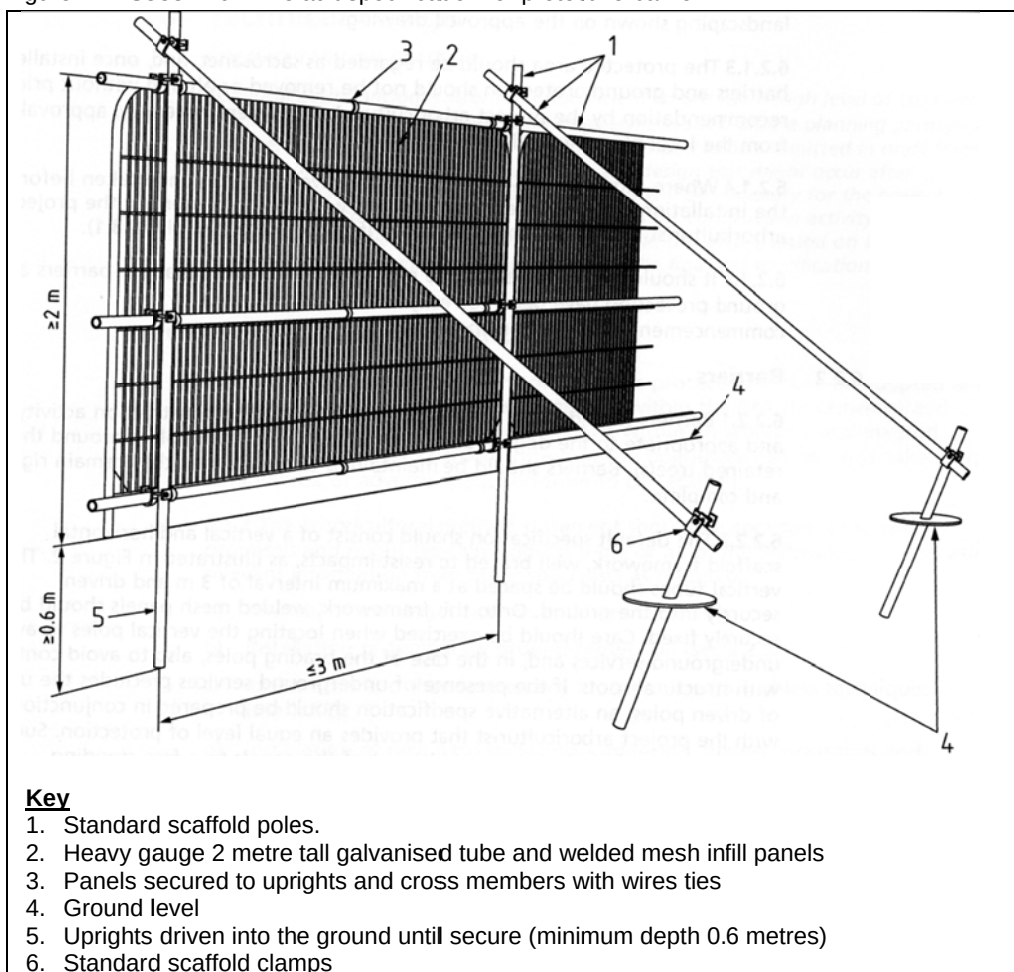
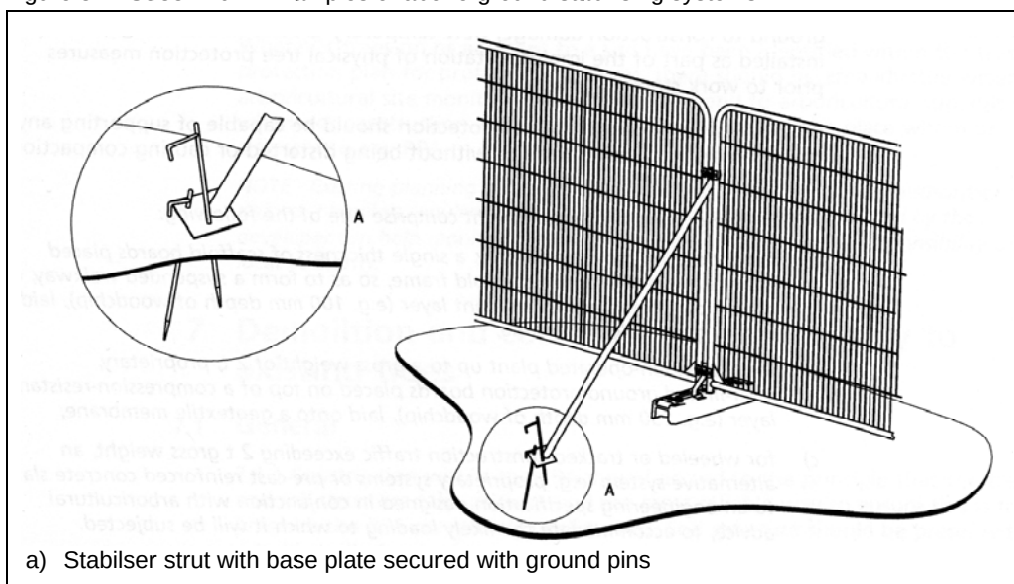
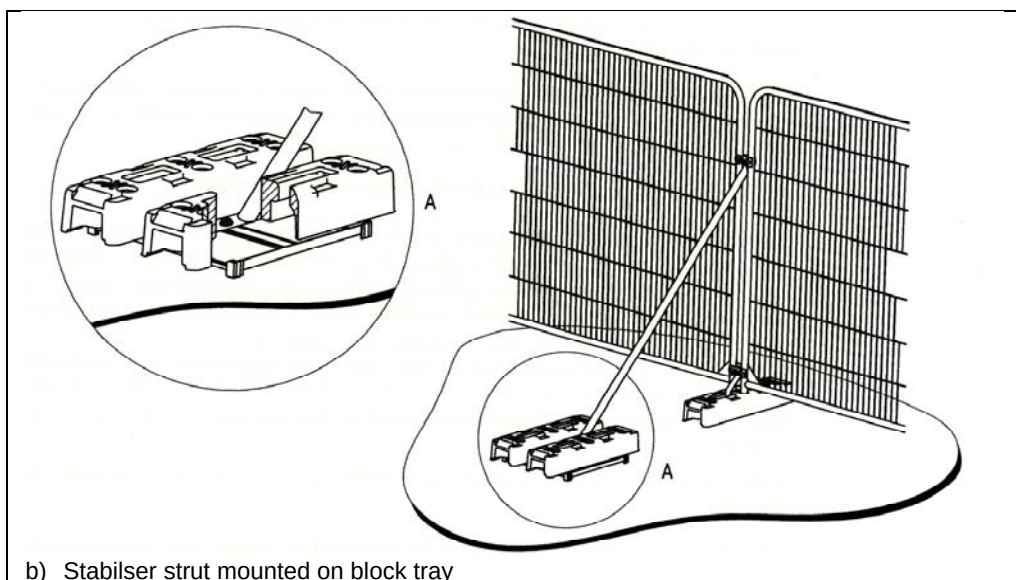
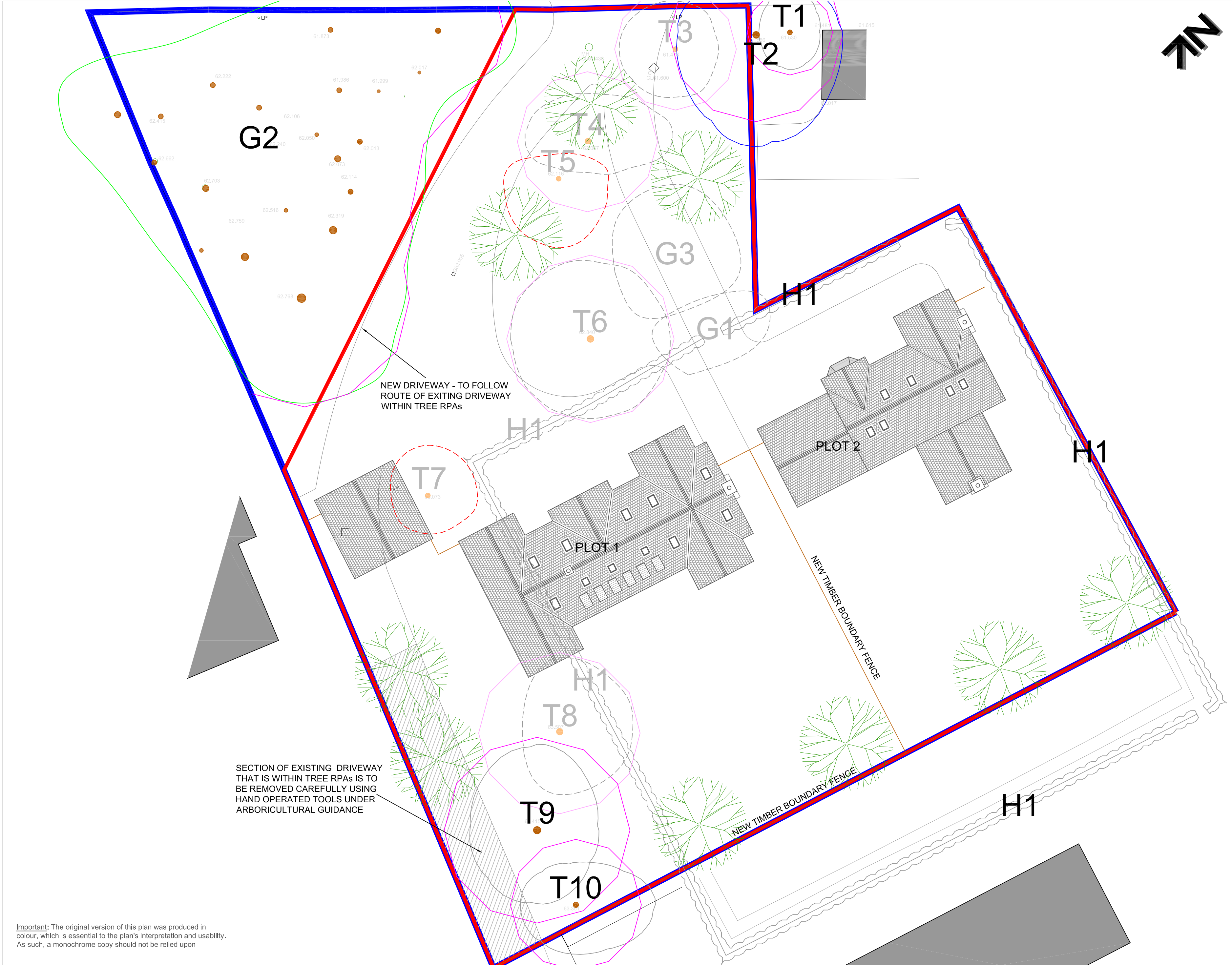


Figure 3: BS5837:2012 Examples of above-ground stabilising systems





b) Stabiliser strut mounted on block tray



KEY

T = Surveyed Individual Tree
 G = Surveyed Group of Trees
 H = Surveyed Hedge

Please refer to associated Tree Survey Schedule for specific details in respect of items below:

Tree Categorisations:

Trees to be Considered for Retention:

- Category 'A' Tree/Group/Hedge
 Those of a High Quality with an Estimated Remaining Life Expectancy of at Least 40 Years
- Category 'B' Tree/Group/Hedge
 Those of a Moderate Quality with an Estimated Remaining Life Expectancy of at Least 20 Years
- Category 'C' Tree/Group/Hedge
 Those of Low Quality with an Estimated Remaining Life Expectancy of at Least 10 Years, or Young Trees

Trees Unsuitable for Retention:

- Category 'U' Tree/Group/Hedge
 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

Note: Trees with crowns marked with broken lines and with numbers marked in grey are proposed/recommended for removal

Root Protection Areas (RPAs):

RPAs
 Area(s) of Ground Around Trees that Should be Protected Throughout Development Works with Protective Fencing to form a Construction Exclusion Zone - see Temporary Protective Fencing Specification

Tree Planting:

Approximate Locations Considered Suitable for New Planting with Trees of Appropriate Species, to be Agreed with Local Planning Authority. Species Considered Suitable Include Liquidambar, Red Oak, Silver Lime & London Plane

Project:
 THE BOWLING GREEN
 BROCKHALL VILLAGE
 OLD LANGHO
 LANCASHIRE

Client:
 OAKWORTH HOMES LTD

Title:
TREE IMPACT PLAN
 in Relation to Proposal to Construct 2no. Detached Residential Properties

Scale: 1:200@A2
 Date: March 2013
 Drawn by: PH

