TREE SURVEY SCHEDULE FOR ARBORICULTURAL CONSTRAINTS APPRAISAL		Surveyor:	Richard Dunn HND	Page: 1 of 3
Site:	Newton Hall, Newton in Bowland, Lancashire, BB7 3DY	Survey Date:	22 March 2017	
Agent for Client:	Sunderland Peacock & Associates Ltd.	Job Ref:	BTC1308	

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	Maple sp.	2.5	85	N E S W	1.5 1.5 1.5 1.5	1.5-N 1	Y	G	▪ Ornamental variety. ▪ No visible defects.	▪	10+	C1	3	1.02
T2	Kilmarnock Willow	1.5	140	N E S W	1 1 1 1	1-N 0.2	SM	G	▪ No visible defects.	▪	10+	C1	9	1.68
T3	Lawson Cypress	7	1x250 1x250 1x220 1x180 1x160 (ms)	N E S W	1.5 1.5 1.5 1.5	0.1-W 0.1	M	G	▪ Multi-stemmed from ground. ▪ Situated within shrub bed, which includes Ornamental Cypress and Elder.	▪	10+	C1	105	5.77
T4	Wild Cherry	3.5	160	N E S W	2.5 3 2 2.5	2-S 1.5	SM	G	▪ Tree has been topped at a height of approximately 2m. ▪ Multiple pruning stubs in crown. ▪ Situated within shrub bed, which includes Forsythia and Rhododendron.	▪	10+	C1	12	1.92
T5	Goat Willow	6	200	N E S W	3 3 3 3.5	0.5-W 1.5	SM	G	▪ Located in close proximity to wall, leaving no space for incremental growth. ▪ Tree growing out of stone trough.	▪ Remove.	<10	U	18	2.4
T6	Lawson Cypress	9	1x320 1x140 (ts)	N E S W	3 3 3 3	2-E 0.1	M	G	▪ Bifurcated from ground. ▪ Multiple primary branches from a height of approximately 2m, tight forks with included bark.	▪	10+	C1	55	4.19

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 nearest half 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 exiting 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	Norway Maple	11	460	N E S W	5 5 6 5.5	3-N 2	M	G	▪ Moderate covering of ivy on stem, spreading into lower crown. ▪ Occluded pruning wounds on the northern and southern sides of the tree at a height of approximately 2m.	▪	10+	C1	96	5.52
T8	Wild Cherry	6	380	N E S W	3 3 4.5 5	1.5-E 1.5	M	G	▪ Stem is heavily covered in ivy, which spreads into upper crown. ▪ Multiple pruning stubs throughout crown. ▪ Situated within shrub bed, which includes Laurel and Cotoneaster.	▪	10+	C1	65	4.56
T9	Hawthorn	7.5	230	N E S W	2 2 2 2	2-E 3	M	G	▪ Stem is heavily covered in ivy, which spreads into upper crown. ▪ Situated within shrub bed, which includes Viburnum, Rhododendron and Laurel.	▪	10+	C1	24	2.76
T10	Colorado Blue Spruce	10.5	310	N E S W	3 3.5 4 3.5	2.5-S 1.5	M	G	▪ Bifurcates at height of approximately 5m. ▪ Slight lean south. ▪ Situated within shrub bed of Ornamental Cypress.	▪	20+	B1	43	3.72
T11	Beech	15	660	N E S W	8 8 8 7.5	2-W 2	M	G	▪ Multiple partially occluded pruning wounds throughout crown. ▪ Light covering of ivy on stem. ▪ Situated within shrub bed, which includes Rhododendron, Laurel and Holly.	▪	20+	B1	197	7.92
T12	Lawson Cypress	8.5	1x250 1x240 (ts)	N E S W	4 2.5 3.5 4	2-N 1.5	M	G	▪ Bifurcated from ground. ▪ Crown biased moderately west. ▪ Suppressed by neighbouring tree. ▪ Two pruning stubs on the eastern side of the tree, at a height of approximately 1m, 300mm in length, 150mm in diameter.	▪	10+	C1	54	4.16
T13	Lawson Cypress	7	370	N E S W	2 1.5 1.5 2.5	2-N 1	SM	G	▪ Crown biased moderately north west. ▪ Moderate covering of Ivy on stem. ▪ Suppressed by neighbouring tree.	▪	10+	C1	62	4.44
T14	Goat Willow	7.5	1x290 1x250 1x170 (ms)	N E S W	4.5 4.5 4.5 4.5	1.5-N 0.5	M	G	▪ Trifurcates at a height of approximately 1.5m.	▪	10+	C1	79	5.03

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No.	Species	Height	Stem Diam.	Branch Spread		Branch & Canopy Clearances	Life Stage	PC	General Observations and Comments	Management Recommendations	ERC	Cat. Grade	RPA (m^2)	RPA Radius (m)
G1	3no. Wild Cherry, 1no. Holly	≤ 6	≤ 150	N E S W	≤ 2.5 ≤ 3 ≤ 2.5 ≤ 2.5	0.5-W ≥ 0.1	SM	G	▪ Moderately spaced group. ▪ Situated within an area of dense shrubs, including Ornamental Cypress, Laurel, Dogwood and Lonicera.	▪	10+	C1	≤ 10	≤ 1.8
G2	2no. Wild Cherry, 1no. Lawson Cypress, 1no. Lilac	≤ 6.5	≤ 200	N E S W	≤ 2.5 ≤ 2.5 ≤ 3 ≤ 2	1-N ≥ 0.0	SM	G	▪ Closely spaced linear group. ▪ Moderate covering of ivy on stems.	▪	10+	C1	≤ 18	≤ 2.4
G3	3no. Apple, 1no. Wild Cherry	≤ 4.5	≤ 160	N E S W	≤ 2 ≤ 2 ≤ 2 ≤ 2	1-N ≥ 1.5	Y-EM	G	▪ Moderately spaced group. ▪ One early mature Apple has fallen.	▪	10+	C1	≤ 12	≤ 1.92

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 *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.*			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 Those of moderate quality and value: those in such a condition as to make a significant contribution. A minimum of 20 years is suggested.	Trees that might be included in the high category, but are downgraded because of impaired condition. Examples include the presence of remediable defects including unsympathetic past management and minor storm damage	Trees present in numbers, usually as groups or woodlands, so they form distinct landscape features which attract a higher collective rating than they might as individuals. But which are not, individually, essential components of formal or semi-formal arboricultural features. For example, trees of moderate quality within an avenue that includes better, A category specimens. Or trees which are internal to the site, therefore individually having little visual impact on the wider locality	Trees with clearly identifiable conservation or other cultural benefits	Blue
Category C Those trees of low quality and value: currently in adequate condition to remain until new planting could be established - a minimum of 10 years is suggested - or young trees with a stem diameter below 150 mm	Trees not qualifying in higher categories	Trees present in groups or woodlands, but without this conferring on them significantly greater landscape value, and/or trees offering low or only temporary screening benefit	Trees with very limited conservation or other cultural benefits	Grey
	Note – Whilst C category trees will usually not be retained where they would impose a significant constraint on development, young trees with a stem diameter of less than 150mm should be considered for relocation			

DISCLAIMER

Survey Limitations: Unless otherwise stated all trees are surveyed from ground level using non-invasive techniques. 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.

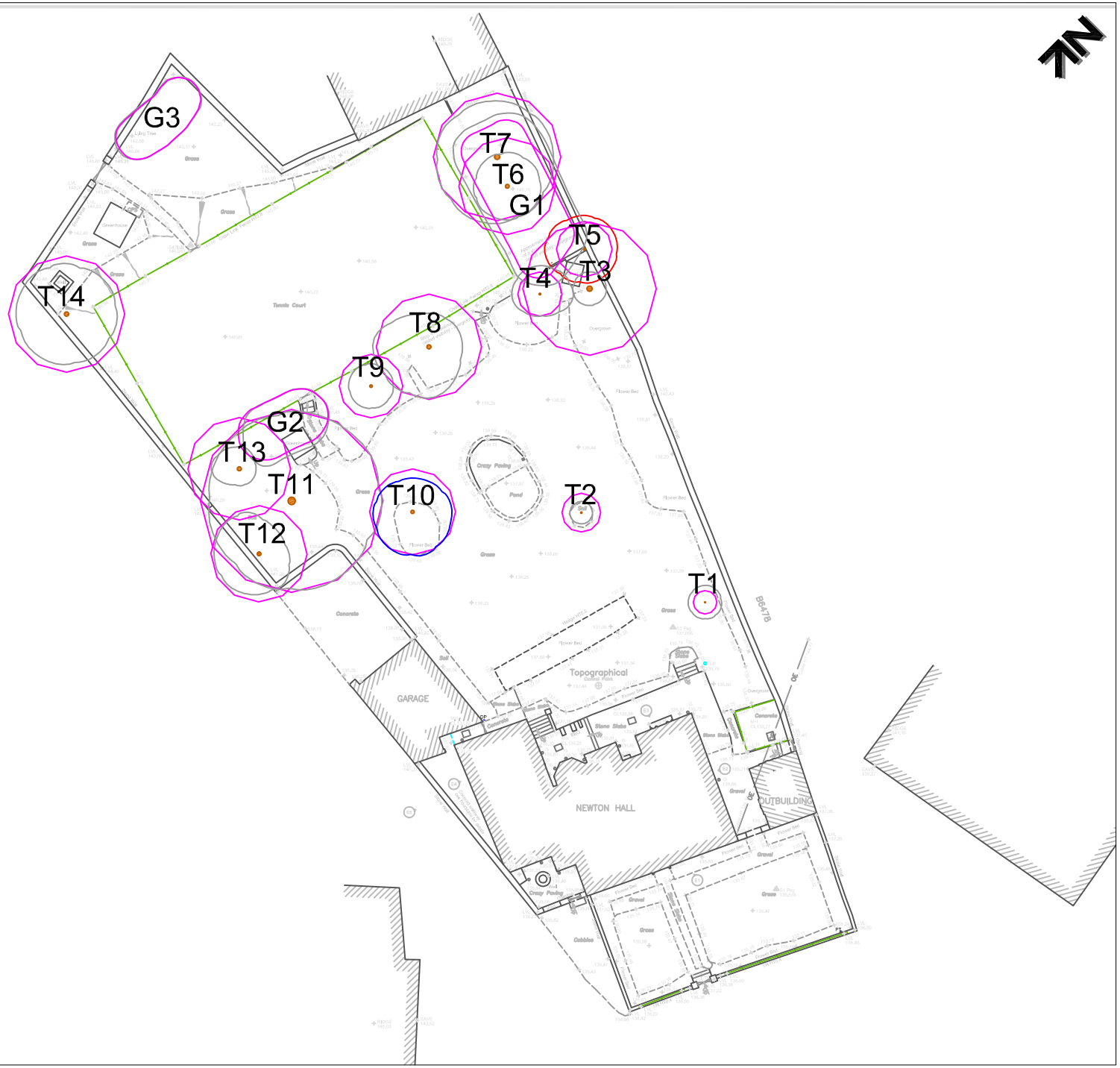
Unless otherwise stated all trees should be re-inspected annually in order to appraise their on-going mechanical integrity and physiological condition. It should, however, be recognised that tree condition is subject to change, for example due to the effects of disease, decay, high winds, development 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. 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 tree survey and any report information provided is intended as a guide to identify key tree related constraints to site development only. As such, the potential influence of trees upon existing or proposed buildings or other structures resulting from the effects of their roots abstracting water from shrinkable load-bearing soils is not considered herein. The tree survey information in its current form should not therefore be considered sufficient to determine appropriate foundation depths for new buildings. Accordingly, an updated survey, with reference to the current NHBC Standards Chapter 4.2 - Building Near Trees, must therefore be prepared for the specific purpose of informing suitable foundation depths subsequent to planning approval being granted. The advice of a structural engineer must also be sought with regard to appropriate foundation depths for new buildings.

Third Parties: Any disclosure of this document to a third party is subject to this disclaimer. The report was prepared by Bowland Tree Consultancy Ltd at the instruction of and for use by our client, as named. This report does not in any way constitute advice to any third party who is able to access it by any means. Bowland Tree Consultancy Ltd excludes to the fullest extent lawfully permitted all liability whatsoever for any loss or damage arising from reliance on the contents of this report.



Important: The original version of this plan was produced in colour, which is essential to the plan's interpretation and usability. As such, a monochrome copy should not be relied upon

KEY

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

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

Tree Categorisations:

Those to be Considered for Retention:

Category 'A' Tree/Group
Those of a High Quality with an Estimated Remaining Life Expectancy of at Least 40 Years

Category 'B' Tree/Group
Those of a Moderate Quality with an Estimated Remaining Life Expectancy of at Least 20 Years

Category 'C' Tree/Group
Those of Low Quality with an Estimated Remaining Life Expectancy of at Least 10 Years, or Young Trees

Those Considered Unsuitable for Retention:

Category 'U' Tree/Group
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: The locations of trees T6 and T9 were not included on the topographical site site plan provided, and their locations were subsequently plotted by the by the arboricultural surveyor using GPS at the time of the survey. As such, the plotted location of these trees cannot therefore be considered to be wholly accurate

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 Specification

Project:
NEWTON HALL
NEWTON IN BOWLAND
LANCASHIRE
BB7 2DY

Agent for Client:
SUNDERLAND PEACOCK & ASSOCIATES LTD

Title:
TREE CONSTRAINTS PLAN
in Relation to Proposed Construction of New Pavilion

Scale:	1:500@A4
Date:	March 2017
Drawn by:	PH
Checked by:	RD

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