

TREE SURVEY SCHEDULE (BS5837: 2012)

SITE:	ST ASAPH FRMS
CLIENT:	BLACK & VEATCH
BRIEF:	STAGE 1 TREE SURVEY & CONSTRAINTS PLAN

SURVEYOR:	A. HENDERSON
ASSESSMENT DATE:	29 FEBRUARY 2016
VIEWING CONDITIONS:	GOOD
JOB REFERENCE:	16/AIA/DEN/21

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TREE NO. <small>T - Tree G - Group H - Hedge</small>	SPECIES (COMMON NAME)	AGE	HEIGHT (m) + CROWN CLEARANCE/ DIRECTION OF GROWTH (N.S.E.W)	RADIAL CROWN SPREAD (m)				STEM/ MULTI-STEM* DIA.(mm)	VITALITY	COMMENTS	MANAGEMENT	CATEGORY & SUB-CATEGORY GRADING BS 5837	BS 5837 RADIUS (m) RPA (m ²)
				N	S	E	W						
T1	Leyland cypress	M	14 1E	2	2	2	2	400	G	<ul style="list-style-type: none"> Multi-stemmed overgrown boundary hedge plant No landscape value E.R.C. 10 	<ul style="list-style-type: none"> Remove if required 	C2	4.8 72m ²
T2	Sycamore	M	14 1E	4	4.5	5.5	5	520	G	<ul style="list-style-type: none"> No visual defects E.R.C. 20 	<ul style="list-style-type: none"> Retain if possible 	B2	6.2 122m ²
T3	Ash	SM	13 3E	1.5	2.5	2	2	160	M	<ul style="list-style-type: none"> Small insignificant self set tree of no value E.R.C. 10 	<ul style="list-style-type: none"> Remove if required 	C2	1.9 12m ²
T4	Birch	EM	12	0.5	0.5	0.5	0.5	150	G	<ul style="list-style-type: none"> Small diameter drawn tree due to suppression No visual importance to locale E.R.C. 10 	<ul style="list-style-type: none"> Remove if required 	C2	1.8 10m ²
T5	Whitebeam	SM	9 1N	0.5	0.5	2	2	130	M	<ul style="list-style-type: none"> Small suppressed tree with no long-term viability E.R.C. 10 	<ul style="list-style-type: none"> Remove if required 	C2	1.5 8m ²

HEADINGS & ABBREVIATIONS

TREE NO.
SPECIES:
AGE RANGE/LIFE STAGE:
HEIGHT:
CROWN SPREAD:
CROWN CLEARANCE & DIRECTION OF GROWTH:
STEM DIA/MULTI-STEM DIA:
VITALITY:
E.R.C. = ESTIMATED REMAINING CONTRIBUTION:
BS 5837 CATEGORY & SUB-CATEGORY GRADING:
BS 5837 RADIUS & BS 5837 RPA:

REFERENCE NUMBER. REFER TO PLAN OR NUMBERED TAGS WHERE APPLICABLE (T = TREE, G = GROUP, H = HEDGE)
 COMMON NAME (LATIN NAMES AVAILABLE ON REQUEST)
 Y = YOUNG, SM = SEMI MATURE, EM = EARLY MATURE, M = MATURE, PM = POST MATURE
 ESTIMATED AND RECORDED IN METRES. APPROXIMATELY 1 IN 10 TREES ARE MEASURED USING A CLINOMETER AND THE REMAINDER ESTIMATED AGAINST THE MEASURED TREES
 MAXIMUM CROWN RADIUS MEASURED TO THE FOUR CARDINAL COMPASS POINTS FOR SINGLE SPECIMENS ONLY (MEASUREMENT FOR TREE GROUPS - MAXIMUM RADIUS OF THE GROUP)
 HEIGHT IN METERS OF CROWN CLEARANCE ABOVE ADJACENT GROUND LEVEL (TO INFORM ON GROUND CLEARANCE, CROWN/STEM RATIO AND SHADING)
 STEM DIAMETER - MEASURED AT APPROXIMATELY 1.5 METRES ABOVE GROUND LEVEL OR A COMBINATION OF STEMS FOR MULTI-STEMMED TREES
 A MEASURE OF PHYSIOLOGICAL CONDITION. D = DEAD, MD = MORIBUND, P = POOR, M = MODERATE, G = GOOD
 RELATIVE USEFUL LIFE EXPECTANCY (YEARS)
 A = HIGH QUALITY AND VALUE, B = MODERATE QUALITY AND VALUE, C = LOW QUALITY AND VALUE, U = UNSUITABLE FOR RETENTION (SUB-CATEGORY REFERS TO ARBORICULTURAL, LANDSCAPE AND CULTURAL/CONSERVATION VALUES)
 PROTECTIVE DISTANCE - RADIUS FROM THE CENTRE OF THE STEM TO THE LINE OF TREE PROTECTION (CONSTRUCTION EXCLUSION ZONE - CEZ) AND PROTECTIVE BARRIER ROOT PROTECTION AREA - BS 5837 (2012) ANNEX D (THE RECOMMENDATIONS STATE THAT THE RPA SHOULD BE CAPPED AT 707 M²) NOTE - ALL CALCULATIONS ROUNDED TO NEAREST DECIMAL

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				N	S	E	W						
T6	Maple	EM	13 5S	1	1	3	3	260	M	<ul style="list-style-type: none"> Co-dominant stems from base with included union Majorly suppressed by adjacent trees E.R.C. 10 	<ul style="list-style-type: none"> Remove if required 	C2	3 31m²
T7	Horse Chestnut	EM	13 1N	2	3	4	5	250	M	<ul style="list-style-type: none"> Crown bias north Poor structural form E.R.C. 10 	<ul style="list-style-type: none"> Remove if required 	C2	3 28m²
T8	Cherry	EM	13 4N	1	1	2	2	150	M	<ul style="list-style-type: none"> Edge tree to small copse located to south Not visually significant E.R.C. 10 	<ul style="list-style-type: none"> Remove if required 	C3	1.8 10m²
T9	Yew	EM	5 0	1	2	4	4	150 x5 (300)	G	<ul style="list-style-type: none"> Multi-stem from base Small self set Sycamore pole within crown to east - needs removing No visual defects E.R.C. 20+ 	<ul style="list-style-type: none"> Remove self set Sycamore pole 	B2	3.6 41m²
T10	Sycamore	M	17 1W	6	4	4	5	700	G	<ul style="list-style-type: none"> Forms part of a small attractive group of trees within the public park No visual defects E.R.C. 40 	<ul style="list-style-type: none"> N/A 	A2	8.4 222m²
T11	Sycamore	M	16 1N	6	5.5	6	5	510	G	<ul style="list-style-type: none"> As T10 	<ul style="list-style-type: none"> N/A 	A2	6.1 118m²

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				N	S	E	W						
T12	Sycamore	M	16 1N	5	3	6	4	530	G	<ul style="list-style-type: none"> Co-dominant stems from 4m Large diameter dead wood in crown E.R.C. 20+ 	<ul style="list-style-type: none"> Remove dead wood 	B2	6.4 127m ²
T13	Maple	M	15 2W	5	5	2.5	5	450	M	<ul style="list-style-type: none"> All crown bias west due to suppression Crown to east dead E.R.C. 20 	<ul style="list-style-type: none"> N/A 	B2	5.4 92m ²
T14	Maple	M	16 1W	4.5	6	7	8	590	G	<ul style="list-style-type: none"> Dead wood in crown E.R.C. 40 	<ul style="list-style-type: none"> N/A 	A2	7.1 157m ²
T15	Maple	EM	15 2W	1.5	4	4	5	380	M	<ul style="list-style-type: none"> Part of linear group of 3 Suppressed as located to close to T14 E.R.C. 20 	<ul style="list-style-type: none"> N/A 	A2	4.6 65m ²
T16	Elm	EM	15 3N	3	5	4	4	300 220 (372)	G	<ul style="list-style-type: none"> 2 stems from base Abuts boundary timber fence Hard standing over roots to west No long-term viability E.R.C. <10 	<ul style="list-style-type: none"> Can be removed if required 	A2	4.5 63m ²
T17	Maple	M	15 0.5W	2	3	5	5	370	G	<ul style="list-style-type: none"> No visual defects E.R.C. 20 	<ul style="list-style-type: none"> N/A 	B2	4.4 62m ²
T18	Maple	M	16 1N	3	4.5	5	5.5	550	G	<ul style="list-style-type: none"> No visual defects E.R.C. 20 	<ul style="list-style-type: none"> N/A 	A2	6.6 137m ²

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				N	S	E	W						
T19	Ash	EM	16 1N	5.5	6.5	6	5	430	G	<ul style="list-style-type: none"> No visual defects E.R.C. 20+ 	<ul style="list-style-type: none"> N/A 	B2	5.2 84m ²
T20	Sycamore	EM	12 1E	4	4	4	4	280	G	<ul style="list-style-type: none"> No visual defects E.R.C. 20+ 	<ul style="list-style-type: none"> N/A 	B2	3.4 35m ²
T21	Ash	SM	6.5 1N	1.5	1.5	1.5	1.5	100	M	<ul style="list-style-type: none"> Small self set tree of no value Located beneath BT lines E.R.C. 0 	<ul style="list-style-type: none"> Remove of required 	C1	1.2 5m ²
T22	Horse Chestnut	EM	13 0.5N	3	4.5	3	4.5	500	G	<ul style="list-style-type: none"> No visual defects E.R.C. 20+ 	<ul style="list-style-type: none"> N/A 	B2	6 113m ²
T23	Willow (Contorted)	M	13 4N	4	5	3.5	3	380	G	<ul style="list-style-type: none"> Ivy clad stem Topped in past Not visually prominent E.R.C. 10+ 	<ul style="list-style-type: none"> Can be removed if required 	B2	4.6 65m ²
T24	Ash	SM	7 1W	2.5	2.5	2	2.5	180	G	<ul style="list-style-type: none"> No visual defects E.R.C. 20 	<ul style="list-style-type: none"> N/A 	B2	2.2 15m ²
T25	Ash	SM	5 2N	3	3	3	3	200	G	<ul style="list-style-type: none"> No visual defects E.R.C. 20 	<ul style="list-style-type: none"> N/A 	B2	2.4 18m ²
T26	Hawthorn	EM	3.5	2	1	1.5	1	200	G	<ul style="list-style-type: none"> Small scrub of no significant value E.R.C. 10 	<ul style="list-style-type: none"> Remove of required 	C2	2.4 18m ²

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				N	S	E	W						
T27	Cherry	M	3.5 1.5N	3	1.5	2.5	2	220	G	<ul style="list-style-type: none"> No visual defects E.R.C. 20+ 	• N/A	B2	2.6 22m ²
T28	Cherry	M	5 1E	3	2.5	3	2	280	G	<ul style="list-style-type: none"> No visual defects E.R.C. 20+ 	• N/A	B2	3.4 35m ²
T29	Ash	SM / EM	10 1.5N	4	4	4	3	280	G	<ul style="list-style-type: none"> Exposed surface roots with mower damage E.R.C. 0 	• N/A	B2	3.4 35m ²
T30	Cherry	M	5 2.5E	2.5	4	4	3.5	310	G	<ul style="list-style-type: none"> Co-dominant stems from 1.8m with included union E.R.C. 20+ 	• N/A	B2	3.7 43m ²
T31	Ash	EM	13 3N	4	4	4	4	180 x3 (312)	G	<ul style="list-style-type: none"> Bifurcates to 3 stems from base Poor structural crown form E.R.C. 10 	• Can be removed if required	C2	3.7 44m ²
T32	Sycamore	EM	5 3E	3	3	4.5	4	240	M	<ul style="list-style-type: none"> Poor structural crown form E.R.C. 10 	• N/A	C2	2.8 26m ²

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				N	S	E	W						
G1	Birch x 9	M	≤5 1N	3	2	1.5	1.5	≤220	G	<ul style="list-style-type: none"> Linear group along the rear boundary of adjacent residential dwelling All topped out at 5m Provide a screen E.R.C. 20 	• N/A	B2	2.6 22m ²
G2	Birch Poplar x 2	EM	≤5 1N	1.5	1.5	1	1	≤150	G	<ul style="list-style-type: none"> As group 1 Poplar trees on each end with DBH of 300mm No long-term viability due to poor pruning E.R.C. 20 	• N/A	B2	1.8 10m ²
G3	Maple	EM	≤4	0.5	1	0.5	0.5	≤160	P	<ul style="list-style-type: none"> Poor quality topped trees of no long-term viability E.R.C. 0 	• N/A	C2	1.9 12m ²
G4	Leyland cypress	EM	3.5	1	1	1	1	≤150	G	<ul style="list-style-type: none"> Well maintained boundary hedge E.R.C. 10+ 	• N/A	C2	1.8 10m ²
G5	Sycamore	SM	≤13 3E	2	2	2	2	≤160	M	<ul style="list-style-type: none"> Unmanaged self set scrub of no value E.R.C. 10 	• Remove if required	C2	1.9 12m ²
G6	Leyland cypress	M	18 1E	4	4	4	4	≤400	G	<ul style="list-style-type: none"> Overgrown & unmanaged hedge making the area dark & oppressive E.R.C. 20+ 	• N/A	B2	4.8 72m ²

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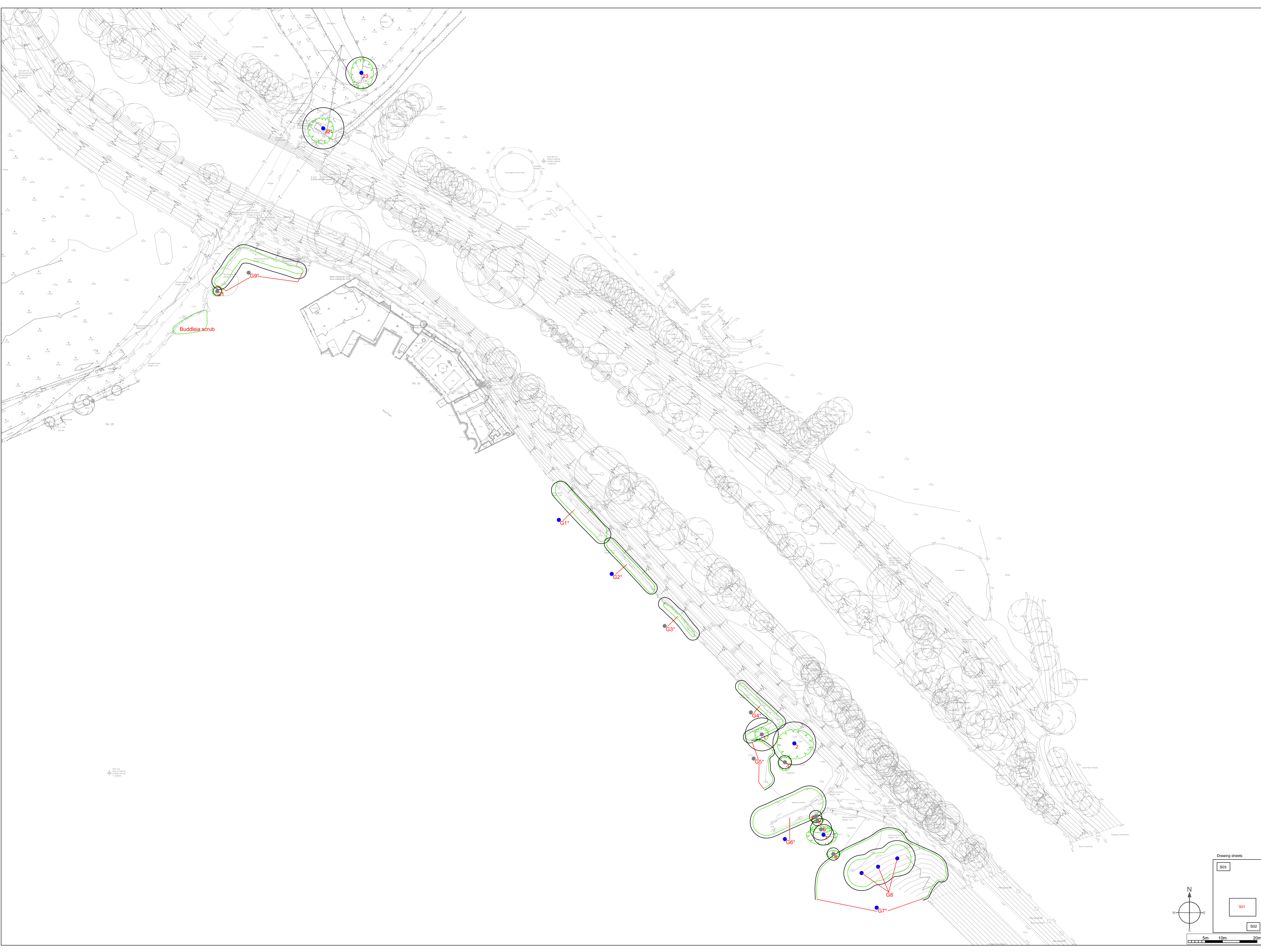
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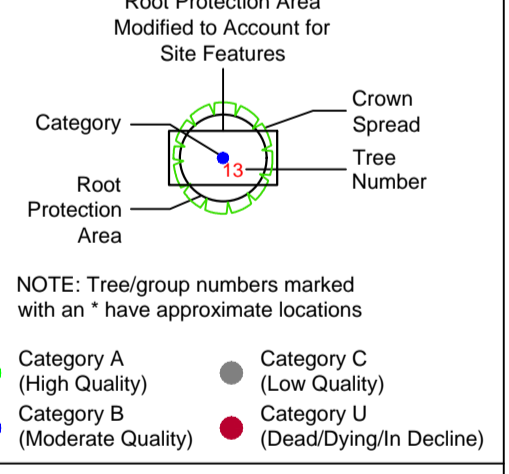
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				N	S	E	W						
G7	Field Maple Cherry Birch Hawthorn Maple	EM	≤15					≤200	G	<ul style="list-style-type: none"> Overgrown & unmanaged hedge making Small unmanaged copse of trees located on downward slope to A55 E.R.C. 20+ 	• N/A	B2	2.4 18m²
G8	Maple	M	15 4E	4	4	4	4	≤430	G	<ul style="list-style-type: none"> Largest trees within G7 No visual defects E.R.C. 20+ 	• N/A	B2	5.2 84m²
G9	Leyland cypress Elder Beech	EM	≤13					≤200	M	<ul style="list-style-type: none"> Unmanaged scrub of no value E.R.C. 10 	• Remove if required	C2	2.4 18m²
G10	Crab apple Hawthorn	EM	4.5 0	1	2	1	1	≤160	G	<ul style="list-style-type: none"> Scrub planting E.R.C. 10+ 	• Could be coppiced if required	C2	1.9 12m²

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	<ul style="list-style-type: none"> 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 <p><i>NOTE</i> Category U trees can have existing or potential conservation value which it might be desirable to preserve; see 4.5.7.</p>			See Table 2
	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)	See Table 2
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	See Table 2
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	See Table 2



Legend



Client: Black & Veatch

Project: St Asaph FRMS

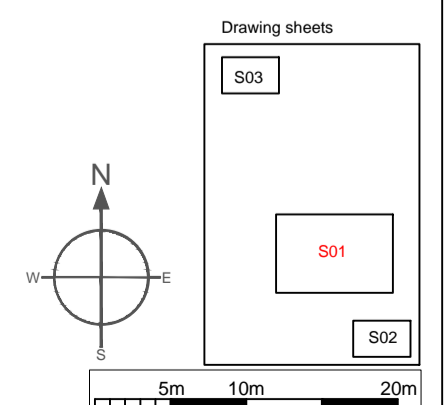
Title: Preliminary Tree Constraints Plan

Scale: 1:500 @ A1	Date: May 2016
Drawn By: LI	Revision: -
Job Ref: 16/AIA/DEN/21	Drawing No: 01

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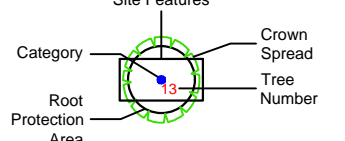
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Legend

Root Protection Area
Modified to Account for
Site Features



NOTE: Tree/group numbers marked with an * have approximate locations

- Category A (High Quality)
- Category B (Moderate Quality)
- Category C (Low Quality)
- Category U (Dead/Dying/In Decline)

Client: Black & Veatch

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Title: Preliminary Tree Constraints Plan

Scale: 1:500 @ A3 Date: May 2016

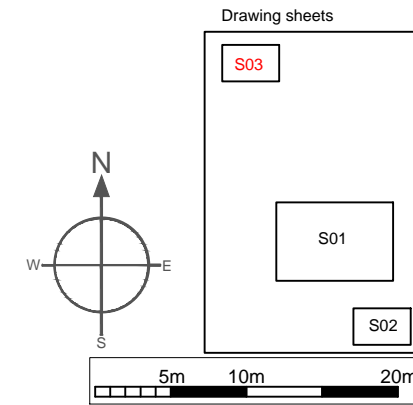
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Tree Solutions
E: info@tree-solutions.co.uk
W: www.tree-solutions.co.uk
T: 01244 389114
M: 07766 774508



Legend

- Root Protection Area Modified to Account for Site Features
- Category (Green circle)
 - Root Protection Area (Green dashed line)
 - Crown Spread (Green solid line)
 - Tree Number (Number in red)
- NOTE: Tree/group numbers marked with an * have approximate locations
- Category A (High Quality) (Green dot)
 - Category B (Moderate Quality) (Blue dot)
 - Category C (Low Quality) (Grey dot)
 - Category U (Dead/Dying/In Decline) (Red dot)

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