

### Appendix 10A – Figure 10A.1 Tree Survey Schedule and BS5837:2012 Table 1



# FIGURE 10A.1 - TREE SURVEY SCHEDULE FOR ARBORICULTURAL IMPACT APPRAISAL Surveyor: Joseph Lambert BSC(Hons) FdSc MArborA Site: Land off Cliffhill Lane, Thoroton, Nottinghamshire, NG13 9DS Survey Dates: 26 & 28 January 2022 Page: 1 of 19 Agent for Client: Neo Environmental BTC2391 FdSc MarborA Page: 1 of 19

No.	Species	Height	Stem Diam.		ranch pread	Branch & Canopy Clearances	Life Stage	PC	General Observations and Comments	Management Recommendations	ERC	Cat. Grade	RPA (m²)	RPA Radius (m)
T1	Common Ash	11.5	330	E S	4.5 4.5 4.5 4.5	3.5 2.5	EM	G	<ul> <li>Tree located in hedgerow, which partially restricted basal inspection.</li> </ul>	•	20+	B1	49	3.96
Т2	Norway Maple	10	290	N E S W	4 4 4 4	2 2.5	SM	G	<ul> <li>Tree located in hedgerow, which partially restricted basal inspection.</li> <li>Multiple branches from 2m height with moderately tight unions and bark damage from mechanical hedge management.</li> </ul>	•	20+	B1	38	3.48
Т3	Norway Maple	12	320	N E S W	5 5 5 5	3 2.5	EM	G	<ul> <li>Tree located in hedgerow, which partially restricted basal inspection.</li> <li>Stem bifurcates at 3m height with wide union.</li> <li>Minor damage to stem from mechanical hedge cutting.</li> </ul>	•	20+	B1	46	3.84
Т4	Sycamore	11	310#	E S	4.5 4.5 4.5 4.5	3 2	SM	G	<ul> <li>Tree located in hedgerow and has moderately dense ivy cover, which restricted detailed inspection.</li> </ul>	•	20+	B1	43	3.72
Т5	Common Oak	12	320#	N E S W	4.5 3 4 4.5	N/A 2	EM	G	<ul> <li>Not accessed or viewed in detail as located beyond group G12 to west, possibly on neighbouring land.</li> </ul>	•	20+	B1	46	3.84
Т6	Common Hawthorn	8	600	E S	4.5 4.5 5.5 5.5	2 2.5	PM	Ρ	<ul> <li>Moderately severe reduction in vitality, with twig dieback to upper canopy.</li> <li>Large split from main stem bifurcation at 2m height to ground level, with evidently long standing brown rot decay and high potential for failure over short term.</li> <li>Habitat potential due to decay.</li> </ul>		<10	U	163	7.2

#### Headings and Abbreviations:

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, 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 m <sup>2</sup> :	Root Protection Årea in m <sup>2</sup> - 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

## FIGURE 10A.1 - TREE SURVEY SCHEDULE FOR ARBORICULTURAL IMPACT APPRAISAL Surveyor: Joseph Lambert BSc(Hons) FdSc MArborA Site: Land off Cliffhill Lane, Thoroton, Nottinghamshire, NG13 9DS Survey Dates: 26 & 28 January 2022 Page: 2 of 19 Agent for Client: Neo Environmental BTC2391 Page: 2 of 19

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)
Т7	Common Ash	18	2x280 2x120 (ms)	N E S W	13 10 10 10	1.5 4	М	M-G	<ul> <li>Evident regrowth from lapsed coppice from previous management as part of hedgerow, with layered stem to north running horizontal just above ground level.</li> <li>Approximately 300mm diameter area of dysfunctional bark on north-east side of stem with old blackened fruiting body of white rot decay causing <i>Inonotus hispidus</i> to north.</li> <li>Decay pocket of approximately 250mm diameter on south side of stem at 500mm height from previous stem removal.</li> <li>Multi-stemmed from approximately 1m height with moderately tight unions.</li> <li>Several recent 150mm diameter branch failures evident from debris on ground.</li> </ul>		10+	C1	443	11.88
Т8	Common Ash	12	850	E S	6 5 6 5	N/A 1	PM	М	<ul> <li>Substantially decayed and hollowed main stem which has failed to south-east at approximately 3m height with canopy now formed from approximately five adventitious stems up to 300mm diameter re-growing from decayed stem.</li> <li>Short projected life expectancy, with high likelihood of failure of adventitious stems.</li> </ul>	•	<10	U	327	10.2
Т9	Common Ash	10	2x380 1x220 2x130 (ms)	Е	5 6.5 7 7	1 2	М	М	<ul> <li>Multi-stemmed from approximately 1m height with significant historic decay in stem below point where stems arise.</li> <li>Significant colonisation of two larger stems by white rot decay causing <i>Inonotus hispidus</i> with depressions in bark of 1m long and 100mm wide from 2m height.</li> <li>Habitat hole of 60mm diameter at 4m height on north-east side.</li> </ul>	•	<10	U	168	7.31
T10	Common Oak	13	750	E S	8 8 8 8	2.5 2	М	G	<ul> <li>Multiple primary branches arise from 2.5m height with pruning wounds up to 150mm diameter from canopy raising at this point.</li> </ul>	<ul> <li>Ensure protection of tree's Root Protection Area (RPA) through establishment of Construction</li> <li>Exclusion Zone (CEZ) in accordance with appended specification for duration of works.</li> </ul>	40+	A1/2	≤ 254	≤ 9
T11	Common Ash	12	380	N E S W	4 4 4 4	2.5 1	EM	G	<ul> <li>Stem trifurcates at 2.5m height with very tight included bark union and stems in contact for 300mm above this.</li> </ul>		10+	C1	65	4.56
T12	Common Oak	10	450	E S	6.5 5.5 5.5 6.5	2.5 1	EM	G	<ul> <li>Multiple branches arise from 2.5m height.</li> </ul>	•	40+	B1/2	92	5.4

# FIGURE 10A.1 - TREE SURVEY SCHEDULE FOR ARBORICULTURAL IMPACT APPRAISAL Surveyor: Joseph Lambert BSG(Hons) FdSc MArborA Site: Land off Cliffhill Lane, Thoroton, Nottinghamshire, NG13 9DS Survey Dates: 26 & 28 January 2022 Page: 3 of 19 Agent for Client: Neo Environmental BTC2391 Page: 3 of 19

No.	Species	Height	Stem Diam.		Branch Bpread	Branch & Canopy Clearances	Life Stage	PC	General Observations and Comments	Management Recommendations	ERC	Cat. Grade	RPA (m²)	RPA Radius (m)
T13	Common Oak	14	960	N 8 E 8 S 8 W 8	8 8	4 2	М	G	<ul> <li>Multiple part and fully occluded pruning wounds approximately 200mm diameter at 4m height from works to raise canopy.</li> </ul>	•	40+	A1/2	417	11.52
T14	Crab Apple	6.5	7x180 (ms)	E 4 S 5	4.5 4.5 5 5	0.5 1.5	М	G	<ul> <li>Multi-stemmed from ground level with tight unions and moderately dense growth which restricted access.</li> <li>Pruned to clear track to east.</li> </ul>	•	20+	C1	102	5.71
T15	Common Oak	11	500	E 4 S 5	4.5 4.5 5.5 5.5	3.5 0	Μ	G	<ul> <li>Slightly bulbous stem base.</li> <li>Large historic fully occluded pruning wound on north-east side of stem at 1.5m height.</li> <li>Dense epicormic growth to stem.</li> </ul>		20+	B1/2	113	6
T16	Common Ash	10.5	320	Ε	5 4.5 3 5	2 2	EM	G	<ul> <li>Moderately suppressed on south side by tree T14.</li> </ul>		10+	C1	46	3.84
T17	Common Oak	17	860		8.5 9	3 3	Μ	G	<ul> <li>Historic decay pocket of approximately 250mm diameter on north side of stem at ground level between buttresses, and widening slightly below buttresses.</li> <li>Habitat hole in buttresses on north-east side of approximately 70mm diameter at ground level.</li> <li>Moderate amount of deadwood up to 120mm diameter and 5m length.</li> </ul>	<ul> <li>Prune tree's canopy to attain an approximate 5m ground clearance over proposed trackway. NB: All works to be undertaken in accordance with BS3998:2010 (See AIA for further details).</li> <li>Construct proposed track through RPA in strict accordance with Table C of AIA using a 3d cellular confinement system (See AIA) with any excavated services and utilities installed outside of the indicated RPA.</li> <li>Ensure protection of tree's remaining RPA through establishment of CEZ in accordance with appended specification for duration of works.</li> </ul>	40+	A1/2	335	10.32
T18	Hybrid Black Poplar	23	2x700 1x400 (ms)#		9 9	0.5 2	М	G	<ul> <li>Located to west of deep water filled ditch.</li> <li>Dense bramble and ivy restricted detailed inspection.</li> <li>Stem of 400mm arising south has very tight union.</li> </ul>		20+	C1/2	516	12.81

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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 (m²)	RPA Radius (m)
T19	Crack Willow	4	1x200 2x150 (ms)#	N 3 E 4.5 S 5 W 5	N/A 0	SM	М	<ul> <li>Located to south of deep water filled ditch.</li> <li>Low canopy to ground.</li> <li>Stem not accessed.</li> </ul>		10+	C1	38	3.5
T20	Common Ash	13	470	N 5 E 5.5 S 6 W 5	1.5-E 0.5	EM	М	<ul> <li>Symptoms of very early stages of colonisation by Ash Dieback Disease to some twig ends.</li> </ul>	<ul> <li>Re-inspect tree during summer 2022 (i.e. when in full leaf) to appraise canopy condition.</li> </ul>	10+	C1	100	5.64
T21	Common Alder	12	1x320 1x270 (ts)	N 4 E 3 S 4 W 4	1 0	EM	M-G	<ul> <li>Twin stemmed from ground level with wide union.</li> <li>Located to south of deep water filled ditch.</li> </ul>		20+	B1	79	5.02
T22	Crack Willow	12	2x370 2x190 (ms)	N 6 E 2 S 6 W 6	N/A 0	EM	М	<ul> <li>Multi-stemmed from ground level.</li> <li>Suppressed by larger neighbouring trees.</li> </ul>		10+	C1	157	7.06
T23	Common Ash	13	320#	N 4 E 3.5 S 3.5 W 4	0.00	EM	М	<ul> <li>Dense bramble prevented access to stem base.</li> <li>Three adventitious shoots up to 100mm diameter arise from base.</li> <li>Largely occluded wound partially visible to south side of stem from ground level up to 1m height.</li> <li>Symptoms of very early stages of colonisation by Ash Dieback Disease to some twig ends.</li> </ul>	<ul> <li>Re-inspect tree during summer 2022 (i.e. when in full leaf) to appraise canopy condition.</li> </ul>	10+	C1	46	3.84
T24	Crack Willow	7	6x90 (ms)	N 2 E 3 S 6 W 3	N/A 0	SM	М	Dense bramble and low canopy impeded access.		10+	C1	22	2.65
T25	Whitebeam	7	2x250 (ts)	N 3 E 3 S 3 W 3	1 0.5	EM	D	■ Dead.		<10	U	N/A	N/A
T26	Common Ash	13	320#	N 5 E 4 S 5 W 5	1-S 0	EM	М	<ul> <li>Symptoms of early stages of colonisation by Ash Dieback Disease to some twig ends.</li> <li>Low canopy restricted access to stem base.</li> </ul>	<ul> <li>Re-inspect tree during summer 2022 (i.e. when in full leaf) to appraise canopy condition.</li> </ul>	10+	C1	46	3.84

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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 (m²)	RPA Radius (m)
T27	Common Ash	14.5	850#	E S	5 6 10 4	2.5-SE 0	РМ	М	<ul> <li>Tree located to north of deep water filled ditch and only viewed from south bank, with RPA offset to north.</li> <li>Significantly decayed stem has evidently previously sustained complete primary branch failure at approximately 8m height with canopy now made up of 300mm diameter regrowth.</li> <li>High habitat potential due to decay and hollowing.</li> <li>High likelihood of further branch losses from decayed stem.</li> </ul>	<ul> <li>Re-inspect tree during summer 2022 (i.e. when in full leaf) to appraise canopy condition.</li> </ul>	<10	U	327	10.2
T28	Common Ash	11	410	E S	4.5 4.5 4.5 4.5	2 0.5	EM	М	<ul> <li>Symptoms of early stages of colonisation by Ash Dieback Disease to some twig ends.</li> </ul>	<ul> <li>Re-inspect tree during summer 2022 (i.e. when in full leaf) to appraise canopy condition.</li> </ul>	10+	C1	76	4.92
T29	Common Alder	8	1x200 1x150 (ts)#	E S	4 5 4.5 2	N/A 0	EM	М	Located in dense bramble and subsequently not accessed.		10+	C1	28	3
Т30	Crack Willow	11	170	≥ ≡ S ≷	1.5 1.5 1.5 1.5	N/A 0	SM	G	<ul> <li>Canopy projected to interfere with overhead high voltage overhead power lines through future growth, with resultant limited future potential for retention.</li> </ul>	<ul> <li>Remove tree due to projected interference with overhead power lines.</li> </ul>	<10	U	13	2.04
T31	Common Alder	6	170	S	1 0 2 2	N/A 0	SM	М	<ul> <li>Suppressed by larger neighbouring tree.</li> </ul>		10+	C1	13	2.04
Т32	Mountain Ash	5	170#	Е	1.5 1.5 1.5 1.5	N/A 0	SM	М	<ul> <li>Dense bramble encroaching lower canopy, which impeded access and inspection.</li> </ul>		10+	C1	13	2.04
Т33	Common Alder	8	410	E S	4.5 4.5 4.5 4.5	1.00	EM	G	No significant visible defects noted at time of survey.		20+	B1	76	4.92
Т34	Common Ash	13	1x320 1x230 (ts)	E S	4 2 4 4	0.6 2	EM	М	<ul> <li>Suppressed on east side and canopy showing symptoms of early stages of colonisation by Ash Dieback Disease to some twig ends.</li> </ul>	<ul> <li>Re-inspect tree during summer 2022 (i.e. when in full leaf) to appraise canopy condition.</li> </ul>	10+	C1	70	4.73

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Site:	Land off Cliffhill Lane, Thoroton, Nottinghamshire, NG13 9DS	Survey Dates:	26 & 28 January 2022		Page: 6 of 19
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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 (m²)	RPA Radius (m)
T35	Crack Willow	5	200#	N E S W	2 2 2 5	N/A 0	SM	М	<ul> <li>Significant stem lean west from ground level from past partial rootplate/stem failure.</li> <li>Dense bramble impeded access.</li> </ul>	•	<10	U	18	2.4
Т36	Mountain Ash	4	100	N E S W	1.5 1 1 1.5	N/A 1.5	SM	М	Mechanical damage to south-west side of stem at 0.5m height.		10+	C1	5	1.2
T37	Common Ash	12	440		5.5 5.5 4.5 5.5	1.8 2.5	EM	М	<ul> <li>Canopy showing symptoms of early stages of colonisation by Ash Dieback Disease to some twig ends.</li> </ul>	<ul> <li>Re-inspect tree during summer 2022 (i.e. when in full leaf) to appraise canopy condition.</li> </ul>	10+	C1	88	5.28
T38	Common Alder	6	150	N E S W	1 1 1 1.5	N/A 0.5	SM	М	<ul> <li>Suppressed by larger neighbouring trees.</li> </ul>		10+	C1	10	1.8
Т39	Common Alder	6.5	180	N E S W	1.5 1.5 1.5 1.5	N/A 1	SM	М	Canopy showing a moderate reduction in vitality.		10+	C1	15	2.16
T40	Common Ash	15	440	N E S W	5.5 4 2 5	3-N 2	EM	М	<ul> <li>Indications of early stages of colonisation by Ash Dieback Disease to some twig ends.</li> </ul>	<ul> <li>Re-inspect tree during summer 2022 (i.e. when in full leaf) to appraise canopy condition.</li> </ul>	10+	C1	88	5.28
T41	Crack Willow	13	450		11 9 11 8.5	1.5 0	PM	Μ	<ul> <li>Upper canopy moderately sparse and showing a moderately significant reduction in vitality.</li> <li>Multi-stemmed from approximately 0.5m height with tight unions.</li> <li>Stem arising to south of 450mm diameter has split and failed along ditch to south just above main union with evident decay within.</li> <li>Bracket of white rot decay causing <i>Cerioporus squamosus</i> in main union and further partial splits and failures to branches within canopy and moderate amount deadwood up to 100mm diameter throughout.</li> </ul>		<10	U	642	14.29
T42	Common Alder	8	300	E S	3.5 3.5 3.5 3.5 3.5	2.5-S 1	EM	G	<ul> <li>Partially occluded pruning wounds at 1m height of 150mm diameter with 30mm diameter regrowth.</li> </ul>	•	20+	B1	41	3.6

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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 (m²)	RPA Radius (m)
T43	Common Ash	14	310	N E S W	4.5 4.5 4.5 4.5	1.3 2	EM	М	<ul> <li>Moderate symptoms indicative of colonisation by Ash Dieback Disease.</li> </ul>	<ul> <li>Re-inspect tree during summer 2022 (i.e. when in full leaf) to appraise canopy condition.</li> </ul>	10+	C1	43	3.72
T44	Crack Willow	14	1x440 1x390 1x340 (ms)	Е	3 7.5 7.5 7.5	0.5 1	EM	G	<ul> <li>Multi-stemmed from 0.5m height with tight unions.</li> <li>Suppressed by larger tree to north.</li> </ul>		10+	C1	209	8.15
T45	Common Alder	12	1x180 1x110 1x100 1x50 (ms)	N E S W		0 0	SM	М	Dense bramble impeded inspection.		10+	C1	26	2.86
T46	Common Ash	11	380	E S	4.5 4.5 4.5 4.5	2 2	EM	Μ	<ul> <li>Indications of early stages of colonisation by Ash Dieback Disease to some twig ends.</li> </ul>	<ul> <li>Re-inspect tree during summer 2022 (i.e. when in full leaf) to appraise canopy condition.</li> </ul>	10+	C1	65	4.56
T47	Crack Willow	13	1x430 1x380 1x290 (ms)	E S	2 6 6 6	0.5 1	EM	M-G	Multi-stemmed from 0.5m height with tight unions.	-	10+	C1	187	7.72
T48	Common Oak	15	1x440 1x370 1x240 (ms)	N E S W	7 7 7 7	0.5-S 1	EM	G	<ul> <li>Multi-stemmed from ground level with wide unions.</li> <li>Stem/branch arising to south at 0.5m height of 240mm diameter crosses and fused to 370mm stem.</li> </ul>	-	20+	B1	176	7.48
T49	Common Oak	6	180#	N E S W	2 2 2 2	1.6-W 1.5	SM	G	<ul> <li>Located in neighbouring water treatment works and not accessed to inspect in detail.</li> </ul>	•	10+	C1	15	2.16
T50	Common Ash	11	380	N E S W	5.5 6 5.5 5.5	3 2	EM	М	<ul> <li>Indications of early stages of colonisation by Ash Dieback Disease to some twig ends.</li> </ul>	<ul> <li>Re-inspect tree during summer 2022 (i.e. when in full leaf) to appraise canopy condition.</li> </ul>	10+	C1	65	4.56
T51	Common Ash	12	340	N E S W	6.5 6.5 6 6	3 2	EM	М	<ul> <li>Moderate ivy to stem.</li> <li>Indications of early stages of colonisation by Ash Dieback Disease to some twig ends.</li> </ul>	<ul> <li>Re-inspect tree during summer 2022 (i.e. when in full leaf) to appraise canopy condition.</li> </ul>	10+	C1	52	4.08

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No.	Species	Height	Stem Diam.		ranch pread	Branch & Canopy Clearances	Life Stage	PC	General Observations and Comments	Management Recommendations	ERC	Cat. Grade	RPA (m²)	RPA Radius (m)
T52	Common Ash	16	740#	Εŧ	8.5 8.5 8.5 9	3.5-S 1.5	Μ	М	<ul> <li>Located in hedge which partially restricted detailed inspection.</li> <li>Moderate reduction in vitality and symptoms indicative of colonisation by Ash Dieback Disease.</li> <li>Multiple occluded pruning wounds from 2m height from raising.</li> </ul>	<ul> <li>Re-inspect tree during summer 2022 (i.e. when in full leaf) to appraise canopy condition.</li> </ul>	10+	C1	248	8.88
Т53	Common Horse Chestnut	17	1x1050 1x440 (ts)	N E S W	9 9	1.5-SW 2	PM	Ρ	<ul> <li>Dense ivy impeded detailed inspection.</li> <li>Canopy showing a moderately significant reduction in vitality.</li> </ul>		<10	U	586	13.66
T54	Hybrid Black Poplar	12	380	N C E S W C	1 3	2 1	SM	G	<ul> <li>Located in barbed wire fence with unclear ownership.</li> <li>Branches up to 75mm diameter mechanically managed on west side to clear field.</li> </ul>		10+	C1	65	4.56
T55	Common Ash	12	430	E 6 S 6 W 7	6.5 6.5 6.5 7.5	3-W 2	EM	G	<ul> <li>Located in hedge which restricted basal inspection.</li> <li>Moderate ivy cover to stem.</li> </ul>	<ul> <li>Re-inspect tree during summer 2022 (i.e. when in full leaf) to appraise canopy condition.</li> </ul>	20+	B1	84	5.16
T56	Common Ash	12	410	S : W :	5.5 5 5.5	2 2	EM	М	<ul> <li>Moderate reduction in vitality and symptoms of early colonisation by Ash Dieback Disease.</li> </ul>	<ul> <li>Re-inspect tree during summer 2022 (i.e. when in full leaf) to appraise canopy condition.</li> </ul>	10+	C1	76	4.92
T57	Common Lime	8	350	E S W	4	1.8 2	EM	G	<ul> <li>Multiple branches from 1.8m height with very tight unions and significant bark inclusions.</li> <li>Not accessed to inspect as located in dense hedging.</li> </ul>		10+	C1	55	4.2
T58	Common Ash	11.5	420	E # S # W #	5.5 5.5 5.5 5.5	2.5 2	EM	M/G	Hedgerow tree.	<ul> <li>Re-inspect tree during summer 2022 (i.e. when in full leaf) to appraise canopy condition.</li> </ul>	20+	B1	80	5.04
Т59	Common Ash	11.5	420	E { S {	5.5 5.5 5.5 5.5	2 2	EM	M/G	Hedgerow tree.	<ul> <li>Re-inspect tree during summer 2022 (i.e. when in full leaf) to appraise canopy condition.</li> </ul>	20+	B1	80	5.04
Т60	Wych Elm	6	(ts)	N E Z S W		N/A 2	SM	D	■ Dead tree.		<10	U	N/A	N/A

### FIGURE 10A.1 - TREE SURVEY SCHEDULE FOR ARBORICULTURAL IMPACT APPRAISAL Site: Land off Cliffhill Lane, Thoroton, Nottinghamshire, NG13 9DS Agent for Client: Neo Environmental

Surveyor:	Joseph Lambert BSc(Hons) FdSc MArborA
Survey Dates:	26 & 28 January 2022
Job Reference:	BTC2391

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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 (m²)	RPA Radius (m)
T61	Wild Cherry	9	(ts)	E S	5.5 5.5 3 3.5	1.5 2	EM	G	Stem bifurcates 1.5m with tight included bark union.	•	20+	C1	52	4.07
T62	Common Ash	21	1x750 1x450	N E S W	5 4 10.5 10.5	3-SE 2	Μ	М	<ul> <li>Part of wider woodland W6 but located to west of water filled ditch.</li> <li>Fungal brackets on ground of white rot decay causing <i>Inonotus hispidus</i> on floor and bark depression associated with decay visible on northern stem at 8m height.</li> <li>Exposed secondary roots extend atop old brick bridge carrying bridleway over watercourse.</li> </ul>	<ul> <li>Re-inspect tree during summer 2022 (i.e. when in full leaf) to appraise canopy condition.</li> </ul>	10+	C1	346	10.5
Т63	Crack Willow	≤ 24	2x500 1x450	S	≤ 7 ≤ 7.5 ≤ 8.5 ≤ 8.5	N/A 2	М	G	<ul> <li>Located to west of water filled ditch which restricted access.</li> <li>Multi-stemmed from ground level with tight unions.</li> </ul>	-	10+	C1	561	13.36
T64	Common Ash	15	750#	N E S W	7 7 8 8.5	0 2	Μ	М	<ul> <li>Two adventitious stems arise to east at ground level.</li> <li>Significant decay cavity to stem which is largely hollow but inspection restricted by vegetation.</li> <li>Mature canopy highly biased west and east canopy formed by regrowth from adventitious stems.</li> </ul>	•	<10	U	254	9
T65	Common Ash	15.5	2x600 (ts)#	S	6 9.5 9 6	2-N 3	М	Ρ	<ul> <li>Severe reduction in vitality and dieback to upper canopy.</li> <li>Basal and stem inspection restricted by vegetation and dense ivy.</li> </ul>	•	<10	U	326	10.18
Т66	Common Oak	16	900#	N E S W	8 8 8 8	3-Е 1	М	G	<ul> <li>Located to north-west of deep water filled ditch and not accessed to inspect in detail.</li> <li>RPA offset to north-west due to adjacent water filled ditch.</li> </ul>	•	40+	A1/2	366	10.8
Т67	Common Oak	14	1x480 1x250 (ts)#	N E S W	6 7 6 6	0 1	EM	G	<ul> <li>Located to north-west of deep water filled ditch and not accessed to inspect in detail.</li> <li>RPA offset to north-west due to adjacent water filled ditch.</li> <li>Twin stemmed from ground level with further smaller adventitious stems from ground level.</li> <li>Lower canopy mechanically pruned on south-east side.</li> </ul>		40+	B1/2	132	6.49
Т68	Common Oak	16	550	N E S W	7 7.5 7 7	4.5 3	EM	G	<ul> <li>Located to north-west of deep water filled ditch and not accessed to inspect in detail.</li> <li>RPA offset to west due to adjacent water filled ditch.</li> </ul>		40+	A1/2	137	6.6

# FIGURE 10A.1 - TREE SURVEY SCHEDULE FOR ARBORICULTURAL IMPACT APPRAISAL Surveyor: Joseph Lambert BSc(Hons) FdSc MArborA Site: Land off Cliffhill Lane, Thoroton, Nottinghamshire, NG13 9DS Survey Dates: 26 & 28 January 2022 Page: 10 of 19 Agent for Client: Neo Environmental BTC2391 Page: 10 of 19

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)
Т69	Common Ash	15	580	E S	8.5 8.5 8.5 8.5	2.5 2	М	M/G	<ul> <li>Located within hedge H17 with moderately dense basal growth, which restricted detailed basal inspection.</li> <li>300mm diameter primary branch arising to west at 3m height has bracket of white rot decay causing <i>Inonotus hispidus</i> approximately 1m from main stem at point of a previous branch failure of approximately 250mm diameter.</li> </ul>		10+	C1	152	6.96
T70	Common Ash	11	380	N E S W	5 4 3.5 5	2 2	SM	М	<ul> <li>Moderate reduction in vitality and moderately large amount of deadwood up to 50mm diameter in inner canopy; greater than expected for life stage.</li> </ul>		10+	C1	65	4.56
T71	Common Horse Chestnut	7	310	E S	3.5 3.5 3.5 3.5	2 2.5	SM	Ρ	<ul> <li>Significant bark necrosis throughout stem and branches and number of bleeding lesions, both of which are indicative of colonisation by Horse Chestnut Bleeding Canker.</li> <li>Short projected remaining life expectancy.</li> </ul>	•	<10	U	43	3.72
T72	Norway Maple	12	460	N E S W	6 5 5 6	2 2	EM	G	<ul> <li>Stem bifurcates 2m height with very tight included bark union and incremental growth typical of species.</li> <li>Union evidently sound at time of inspection, but increased likelihood of failure over long term.</li> </ul>	<ul> <li>Monitor union at bifurcation point for incipient signs of failure.</li> </ul>	10+	C1	96	5.52
T73	Common Horse Chestnut	6	280	E S	3.5 2 2 3.5	N/A 0	SM	Ρ	<ul> <li>Significant bark necrosis throughout stem and branches, prolific basal growth and number of bleeding lesions, both of which are indicative of colonisation by Horse Chestnut Bleeding Canker.</li> <li>Short projected remaining life expectancy.</li> </ul>		<10	U	35	3.36
T74	Norway Maple	7	260	N E S W	3.5 3.5 3.5 3.5 3.5	2 2	SM	G	<ul> <li>Dense ivy to stem.</li> <li>Sign growing into stem at approximately 1.2m height and moderate stem lean east.</li> <li>Multiple branches mechanically pruned on east side of lower canopy up to 50mm diameter lower canopy.</li> </ul>	•	10+	C1	31	3.12
T75	Common Ash	14	590	N E S W	7 7 7 7	1.8 1	EM	G	Stem bifurcates at 1.8m height with moderately tight union.		20+	B1	157	7.08
T76	Common Ash	15	550	N E S W	7 7 7 7	1.5-S 1	EM	G	No significant visible defects noted at time of survey.	•	20+	B1	137	6.6

## FIGURE 10A.1 - TREE SURVEY SCHEDULE FOR ARBORICULTURAL IMPACT APPRAISAL Surveyor: Joseph Lambert BSc(Hons) FdSc MArborA Site: Land off Cliffhill Lane, Thoroton, Nottinghamshire, NG13 9DS Survey Dates: 26 & 28 January 2022 Page: 11 of 19 Agent for Client: Neo Environmental BTC2391 Page: 11 of 19

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)
Т77	Common Ash	9	390	N E S W	5 5 5 5	1.6 1	SM	G	<ul> <li>No significant visible defects noted at time of survey.</li> </ul>	•	20+	B1	69	4.68
G1	4no. Norway Maple, 2no. Lime	≤ 8	1x220 1x150	S	≤ 4 ≤ 3.5 ≤ 3 ≤ 3.5	1.5 ≥ 3	SM	G	<ul> <li>Moderately spaced linear group in hedge.</li> <li>Multiple tight included bark unions throughout and evidently previously topped by mechanical hedge cutting around hedge top height with resultant poor forms.</li> </ul>		10+	C1	≤ 32	≤ 3.2
G2	Beech, Cherry Laurel, Oak, Pine.	≤ 11		N E S W	≤ 5 ≤ 5 ≤ 5 ≤ 5	N/A ≥ 0	SM	G	<ul> <li>Not accessed to inspect in detail.</li> <li>Very closely spaced group with mutual canopy suppression in parts.</li> </ul>	-	20+	C1/2	≤ 41	≤ 3.6
G3	Acacia, Horse Chestnut, Norway Maple	≤ 14	≤ 420#	N E S W	≤ 7 ≤ 6 ≤ 6 ≤ 6	N/A ≥ 2	EM	G	<ul> <li>Moderately spaced group located on neighbouring land and subsequently not accessed to inspect in detail.</li> </ul>		20+	B1/2	≤ 80	≤ 5.04
G4	Horse Chestnut, Norway Maple, Sycamore	≤ 14		N E S W	≤ 5.5 ≤ 5.5 ≤ 5.5 ≤ 5.5	N/A ≥ 0	EM	G	<ul> <li>Moderately spaced linear group located on neighbouring land and not accessed to inspect in detail.</li> <li>Located within hedge H2 which restricted visibility of basal inspection.</li> </ul>		20+	B1/2	≤ 80	≤ 5.04
G5	Lombardy Poplar	≤ 20	≤ 550	N E S W	≤ 5 ≤ 5 ≤ 5 ≤ 5	N/A ≥ 2	EM	M-P	<ul> <li>Closely spaced linear group located on neighbouring land and in hedge H2 and subsequently not accessed to inspect in detail.</li> <li>All showing moderately severe reductions in vitality and twig dieback, possibly indicative of colonisation by bacterial pathogen anthracnose</li> </ul>		<10	U	≤ 137	≤ 6.6
G6	approx. 16no. English Elm	≤ 6		N E S W	≤1 ≤1 ≤1 ≤1	N/A ≥ 0	SM	MD-	<ul> <li>Closely spaced groups.</li> <li>Evidently part of outgrown hedge.</li> <li>Several stems moribund due to colonisation by Dutch Elm Disease to western end.</li> </ul>		<10	U	≤ 7	≤ 1.44
G7	approx. 8no. Wych Elm	≤ 10	1x200 3x150		≤ 4.5 ≤ 4.5 ≤ 4.5 ≤ 4.5	N/A ≥ 3	SM		<ul> <li>Emergent stems from hedge in loosely spaced linear group.</li> <li>Many stems previously topped at 2m height.</li> <li>High susceptibility to Dutch Elm Disease with several trees showing symptoms of dieback in canopies of varying levels.</li> <li>One tree is dead.</li> </ul>		<10	U	≤ 49	≤ 3.93
G8	2no. Common Ash	≤ 11	2x220 1x130	Е	≤ 5 ≤ 5 ≤ 5 ≤ 5	N/A ≥ 2.5	EM	G	<ul> <li>Multi-stemmed from ground level.</li> <li>Evidently outgrown section of hedge.</li> <li>Previously coppiced at ground level and topped at hedge height.</li> </ul>	<ul> <li>Re-inspect group during summer 2022 (i.e. when in full leaf) to appraise canopy condition.</li> </ul>	10+	C1	≤ 84	≤ 5.18

## FIGURE 10A.1 - TREE SURVEY SCHEDULE FOR ARBORICULTURAL IMPACT APPRAISAL Surveyor: Joseph Lambert BSc(Hons) FdSc MArborA Site: Land off Cliffhill Lane, Thoroton, Nottinghamshire, NG13 9DS Survey Dates: 26 & 28 January 2022 Agent for Client: Neo Environmental BTC2391

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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 (m²)	RPA Radius (m)
G9	Elm	≤ 15	≤ 400#	N E S W	$\leq 4$ $\leq 4$ $\leq 4$ $\leq 4$	N/A ≥ 0	EM	G-D	<ul> <li>Dense group of trees located on neighbouring land to south and not subsequently accessed to inspect in detail.</li> <li>Approximately four early-mature trees to centre with remaining group made up of re-growth from rootstock of approximately 150mm diameter, several of which are dead and partially failed.</li> <li>Dense ivy to many stems.</li> </ul>	•	10+	C1/2	≤ 72	≤ 4.8
G10	Hawthorn	VI 80	≤ 3x150 (ms)	N E S W	≤ 3.5 ≤ 3.5 ≤ 3.5 ≤ 3.5	N/A ≥ 0	Μ	М	<ul> <li>Closely spaced linear group which is evidently a lapsed and unmanaged hedgerow with dense ivy in parts.</li> <li>Several stems showing moderate reductions in vitality.</li> <li>Group mechanically managed on east and west sides to maintain clearance to fields.</li> </ul>		10+	C1/2	≤ 31	≤ 3.12
G11	Common Ash	≤ 13.5	≤ 9x180 (ms)	E S	≤ 10.5 ≤ 10.5 ≤ 7 ≤ 7	N/A ≥ 3	EM	Ρ	<ul> <li>Multi-stemmed Ash within outgrown hedge along boundary.</li> <li>All previous coppice stools as a result of previous management of cutting and laying with resultant stem curvatures and historic decay pockets to base.</li> <li>Canopies showing moderately severe reductions in vitality and twig dieback indicative of colonisation by Ash Dieback Disease.</li> </ul>	<ul> <li>Re-inspect group during summer 2022 (i.e. when in full leaf) to appraise canopy condition.</li> </ul>	<10	U	≤ 132	≤ 6.48
G12	Blackthorn, Hawthorn	⊻ 8	N/A	N E S W	≤2 ≤2 ≤2 ≤2	N/A ≥ 0	SM	G	<ul> <li>Dense stand forming boundary along field edge.</li> <li>Unable to access or view in detail due to density of growth.</li> <li>Evident mechanical managed on east side.</li> </ul>		20+	C2	N/A	≈ 1
G13	approx. 5no. Common Ash	≤ 13.5	≤ 1x340 4x170 (ms)	N E S W	≤ 7 ≤ 7 ≤ 7 ≤ 7	N/A ≥ 0	EM	M-G	<ul> <li>Multiple broken branches up to 130mm diameter on east side adjacent to field from passing agricultural machinery.</li> </ul>	<ul> <li>Re-inspect group during summer 2022 (i.e. when in full leaf) to appraise canopy condition.</li> </ul>	10+	C1/2	≤ 105	≤ 5.77
G14	14no. Common Ash	≤ 10.5	≤ 360	N E S W	≤ 5.5 ≤ 5.5 ≤ 5.5 ≤ 5.5	2 ≥2	EM	M-G	<ul> <li>Linear group of hedgerow trees with basal inspections subsequently limited.</li> <li>Canopies showing some symptoms of reduced vitality potentially indicative of colonisation by Ash Dieback Disease.</li> </ul>	<ul> <li>Re-inspect group during summer 2022 (i.e. when in full leaf) to appraise canopy condition.</li> </ul>	10+	C1	≤ 84	≤ 5.17
G15	2no. Common Ash	≤ 13	≤ 420	N E S W	≤ 4 ≤ 4 ≤ 4 ≤ 4	2.5 ≥ 1	EM	М	<ul> <li>Closely spaced pair with minor indications of colonisation by Ash Dieback Disease.</li> </ul>	<ul> <li>Re-inspect group during summer 2022 (i.e. when in full leaf) to appraise canopy condition.</li> </ul>	10+	C1	≤ 80	≤ 5.04

## FIGURE 10A.1 - TREE SURVEY SCHEDULE FOR ARBORICULTURAL IMPACT APPRAISAL Surveyor: Joseph Lambert BSc(Hons) FdSc MArborA Site: Land off Cliffhill Lane, Thoroton, Nottinghamshire, NG13 9DS Survey Dates: 26 & 28 January 2022 Agent for Client: Neo Environmental BTC2391 Page: 13 of 19

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)
G16	2no. Common Ash	≤ 10	≤ 1x200 1x180 1x150 (ms)	E S	≤ 3 ≤ 3 ≤ 2 ≤ 1.5	N/A ≥ 3	SM	М	<ul> <li>Outgrown from hedge and previously cut at 1.2m height and now multi-stemmed from this point.</li> <li>Partial split between stems of 120mm diameter at 2m on tree to south-west.</li> <li>Multiple bark wounds from hedge cutting/passing machinery.</li> </ul>	<ul> <li>Re-inspect group during summer 2022 (i.e. when in full leaf) to appraise canopy condition.</li> </ul>	10+	C1	≤ 43	≤ 3.7
G17	Hybrid Black Poplar, Willow, Ash, Alder	≤ 23	≤ 2x700 1x400 (ms)#	N E S W	≤ 9 ≤ 8 ≤ 7.5 ≤ 7.5	2 ≥ 1	Μ	G	<ul> <li>Moderately-closely spaced group of mature Poplar along south of deep water filled ditch with some interspersed semi and early-mature Willow, Ash and Alder.</li> <li>RPAs subsequently reduced on north side due to water filled ditch and projected restrictions to root growth in this direction.</li> <li>Dense bramble around stem bases prevented access in most parts.</li> <li>Majority of Poplars have very tight stem unions at base and adaptive incremental strips.</li> <li>Ash showing early indications of colonisation by Ash Dieback Disease.</li> <li>Although tree quality is considered low due to species composition, form and structure, trees are evidently visually prominent within wider landscape.</li> </ul>	<ul> <li>Re-inspect Ash in group during summer 2022 (i.e. when in full leaf) to appraise canopy condition.</li> </ul>	10+	C1/2	≤ 516	≤ 12.81
G18	Hybrid Black Poplar	≤ 22	≤ 1x600 1x550 1x400 (ms)	E S	≤ 8 ≤ 8 ≤ 8 ≤ 8	N/A ≥ 1	М	G	<ul> <li>Loosely spaced group along south of deep water filled ditch and west of shallow dry ditch and subsequently viewed from south and west only.</li> <li>RPAs of trees to north subsequently reduced on north side due to water filled ditch and projected restrictions to root growth in this direction.</li> <li>Dense bramble, ditches and prolific lower stem growth impeded access in parts.</li> <li>Evidently continuation of trees within group G17 but becoming wider spaced.</li> <li>Although tree quality is considered low due to species composition, form and structure, trees are evidently visually prominent within wider landscape.</li> </ul>		20+	C1/2	≤ 372	≤ 10.88
G19	5no. Hybrid Black Poplar	≤ 10	≤ 140	N E S W	≤ 0.5 ≤ 0.5 ≤ 0.5 ≤ 0.5	N/A ≥ 0	Y	G	<ul> <li>Very closely to loosely spaced group in hedge along edge of woodland W4.</li> </ul>	•	10+	C1	≤ 9	≤ 1.68
G20	Common Hawthorn, Elm, Willow	4	2x170 (ts)#	N E S W	3 3 3 3	N/A 0	SM	G	<ul> <li>Loosely to closely spaced group of predominantly Hawthorn growing between fields.</li> </ul>		10+	C1	≤ 26	≤ 2.88

# FIGURE 10A.1 - TREE SURVEY SCHEDULE FOR ARBORICULTURAL IMPACT APPRAISAL Surveyor: Joseph Lambert BSG(Hons) FdSc MArbor A Site: Land off Cliffhill Lane, Thoroton, Nottinghamshire, NG13 9DS Survey Dates: 26 & 28 January 2022 Page: 14 of 19 Agent for Client: Neo Environmental BTC2391

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)
G21	2no. Sycamore	≤ 18	≤ 2x620 (ts)	S	≤ 8 ≤ 10 ≤ 8 ≤ 5	N/A ≥ 0	Μ	G	<ul> <li>Tree to west has moderately severe stem lean north-east from ground level.</li> <li>Tree to east is twin-stemmed from ground level with cupped union.</li> <li>Moderately dense ivy restricted detailed inspection.</li> <li>Prolific basal growth with multiple adventitious stems up to 250mm diameter.</li> </ul>	•	20+	B1	≤ 348	≤ 10.52
G22	Ash, Oak, Pine, Sycamore etc.	≤ 11	≤ 220#	N E S W	≤2 ≤2 ≤2 ≤2	N/A ≥ 0	SM- EM	M-G	<ul> <li>Small shelterbelt planting on neighbouring land to south.</li> <li>Not accessed to inspect in detail.</li> <li>Tight included bark unions frequent throughout group.</li> </ul>		20+	C1/2	≤ 22	≤ 2.64
G23	2no. Elder	≤ 4	≤ 75	N E S W	≤ 1.5 ≤ 1.5 ≤ 1.5 ≤ 1.5	N/A ≥ 0	SM	Ρ	<ul> <li>Loosely spaced group in bank showing a significant reduction in vitality.</li> </ul>	•	<10	U	≤ 23	≤ 2.7
G24	Ash, Oak, Pine, Sycamore etc.	≤ 11	≤ 220#	N E S W	≤2 ≤2 ≤2 ≤2	N/A ≥ 0	SM- EM	M-G	<ul> <li>Small shelterbelt planting on neighbouring land to east.</li> <li>Not accessed to inspect in detail.</li> <li>High percentage of Ash within group.</li> </ul>	•	20+	C1/2	≤ 22	≤ 2.64
G25	2no. Sycamore	≤ 17	≤ 630	N E S W	≤ 7.5 ≤ 8.5 ≤ 6.5 ≤ 7	0 ≥ 0	М	М	<ul> <li>Closely spaced pair in field centre.</li> <li>Evident holes below and around indicating burrowing animal activity in ground.</li> <li>Prolific adventitious shoots from base up to 200mm diameter.</li> <li>Tree located to south-east has historic decay and basal wound on north-west side from ground level up to 500mm height and 300mm width which has part occluded and stem has moderately severe lean to south-east from ground level.</li> </ul>		20+	B1	≤ 180	≤ 7.56
G26	2no. Common Oak, 1no. Sweet Chestnut	≤ 7	≤ 220	N E S W	≤ 2.5 ≤ 2.5 ≤ 2.5 ≤ 2.5	N/A ≥ 0	SM	G	<ul> <li>Located in highway verge.</li> <li>Canopy of tree to north-west has been excessively raised.</li> </ul>	•	10+	C1	≤ 22	≤ 2.64
G27	Cherry Laurel, Field Maple, Hawthorn, Larch, Sitka Spruce, Willow	≤ 13	≤ 270		≤ 4.5 ≤ 4.5 ≤ 4.5 ≤ 4.5	N/A ≥ 0	SM	M-G	<ul> <li>Very closely spaced group.</li> <li>Not accessed due to dense canopies and dense bramble.</li> <li>South-west corner pruned to clear overhead high voltage power line.</li> </ul>	•	10+	C1	≤ 33	≤ 3.24

### FIGURE 10A.1 - TREE SURVEY SCHEDULE FOR ARBORICULTURAL IMPACT APPRAISAL Surveyor: Joseph Lambert BSc(Hons) FdSc MArborA Site: Land off Cliffhill Lane, Thoroton, Nottinghamshire, NG13 9DS Survey Dates: 26 & 28 January 2022 Agent for Client: Neo Environmental BTC2391

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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 (m²)	RPA Radius (m)
G28	Alder, Ash, Hawthorn, Hybrid Black Poplar, Willow	≤ 25	1x750	S	≤ 9 ≤ 8 ≤ 8 ≤ 9	N/A ≥ 0	Μ	G	<ul> <li>Moderately spaced group along western side of deep water filled ditch with interconnecting Hawthorn scrub.</li> <li>Dense vegetation around stem bases restricted access.</li> <li>Ash showing symptoms indicative of potential early stages of colonisation by Ash Dieback Disease.</li> <li>Willows and Poplars have tight basal unions some with significant bark inclusions.</li> </ul>	<ul> <li>Re-inspect Ash in group during summer 2022 (i.e. when in full leaf) to appraise canopy condition.</li> </ul>	20+	C1/2	≤ 544	≤ 13.16
G29	2no. Silver Birch	≤ 14	≤ 200	N E S W	≤5 ≤3 ≤0 ≤3	N/A ≥ 3	SM	G	<ul> <li>Closely spaced pair in woodland fringe with moderate stem leans north-east from ground level and highly biased canopies north-east.</li> </ul>		10+	C1	≤ 18	≤ 2.4
G30	3no. Ash, 1no. Sycamore	≤ 14	3x320	N E S W	≤ 7 ≤ 6 ≤ 6 ≤ 7	N/A ≥ 2	EM	M/G	<ul> <li>Closely spaced group all with multiple stems from ground level and tight unions.</li> <li>Brambles and ditch restricted detailed inspection.</li> <li>Ash evidently showing symptoms of early stages of colonisation by Ash Dieback Disease.</li> </ul>		10+	C1	≤ 191	≤ 7.8
G31	Ash, Crack Willow, Field Maple, Goat Willow, Hybrid Black Poplar, Rowan, Sycamore, Western Balsam Poplar, Wild Cherry	≤ 22	≤ 1x650 1x550 1x390 (ms)	N E S W	≤ 9 ≤ 9 ≤ 9 ≤ 10	N/A ≥ 0	М	G	<ul> <li>Closely to loosely spaced linear group along west of deep water filled ditch with brambles around stem bases restricting access for inspection in parts.</li> <li>Second Willow from south has sustained multiple stem failures at 0.5m height and is substantially decayed.</li> </ul>		20+	C1	≤ 397	≤ 11.24
G32	Ash, Horse Chestnut, Lime, Norway Maple, Sycamore	≤ 13.5	≤ 550	N E S W	≤ 6 ≤ 6 ≤ 6 ≤ 6	N/A ≥ 1.5	SM- EM	G	<ul> <li>Widely spaced semi and early-mature trees within hedgerow which restricted detailed inspection of bases.</li> <li>Majority have multiple branches arising from 2-3m height.</li> <li>Dense lvy to some stems further south.</li> </ul>	•	20+	B1/2	≤ 137	≤ 6.6
G33	Leyland Cypress, Hawthorn, Privet, Sycamore	≤ 11		N E S W	≤ 4.5 ≤ 4.5 ≤ 4.5 ≤ 4.5	N/A ≥ 0	SM	G	<ul> <li>Very closely spaced linear group along boundary with unclear ownership.</li> <li>Not accessed to inspect in detail.</li> <li>Group evidently managed on north side to approximately 3m height to clear field.</li> <li>Some small sections of Privet and Hawthorn and some self-set Sycamore within.</li> </ul>	•	10+	C1	≤ 65	≤ 4.56

# FIGURE 10A.1 - TREE SURVEY SCHEDULE FOR ARBORICULTURAL IMPACT APPRAISAL Surveyor: Joseph Lambert BSc(Hons) FdSc MArborA Site: Land off Cliffhill Lane, Thoroton, Nottinghamshire, NG13 9DS Survey Dates: 26 & 28 January 2022 Page: 16 of 19 Agent for Client: Neo Environmental BTC2391 Page: 16 of 19

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)
G34	Ash, Elder	≤ 6	≤ 110#	E S	≤1 ≤1 ≤1 ≤1	N/A ≥ 0	SM	М	<ul> <li>Unclear ownership boundaries.</li> <li>Approximately five Ash evidently planted with old stakes and ties.</li> <li>Group becomes self-set Elder within ditch bottom.</li> </ul>		10+	C1	≤ 5	≤ 1.32
G35	Ash, Spruce, Sycamore	≤ 16	≤ 300#	E S	≤ 4 ≤ 4 ≤ 4 ≤ 4	N/A ≥ 1	EM	M-G	<ul> <li>Not subsequently accessed.</li> </ul>		20+	B1/2	≤ 41	≤ 3.6
G36	Scots Pine	≤ 15	≤ 510	E S	≤ 7.5 ≤ 7.5 ≤ 7.5 ≤ 7.5	2 ≥2	EM	G	<ul> <li>Stand of closely spaced trees south of field margin.</li> <li>Several have moderately severe stem leans north from ground level.</li> <li>Extremely dense ivy to stems and ground and dense ground vegetation, which impeded inspection in most parts.</li> <li>Canopies to north-east low over adjacent agricultural field.</li> </ul>		20+	C1/2	≤ 118	≤ 6.12
G37	Alder, Ash, Cockspur Thorn, Crack Willow, Field Maple, Hybrid Black Poplar, Western Balsam Poplar	≤ 22	≤ 6x450 (ms)#	E S	≤ 11 ≤ 11 ≤ 11 ≤ 11	N/A ≥ 0	М	M-G	<ul> <li>Moderately to loosely spaced group along west and north of deep water filled ditch, with RPAs subsequently reduced and offset accordingly.</li> <li>Vegetation restricted access to stem bases in parts.</li> <li>Willow and Hybrid Black Poplar multi-stemmed from ground level.</li> <li>Several Western Balsam Poplar have slight stem swelling to base and dieback to twigs in canopy indicative of bacterial pathogen.</li> </ul>		20+	C1/2	≤ 550	≤ 13.23
W1	Ash, Beech, Birch, Larch, Maple, Oak, Pine	≤ 17.5	≤ 400	E S	≤ 7.5 ≤ 7.5 ≤ 7.5 ≤ 7.5	N/A ≥ 0	SM	G-P	<ul> <li>restricted access.</li> <li>Woodland would benefit from formative pruning and silvicultural thinning works.</li> </ul>	<ul> <li>Re-inspect Ash in woodland during summer 2022 (i.e. when in full leaf) to appraise canopy condition.</li> </ul>	40+	B1/2	≤ 72	≤ 4.8
W2	Cherry, Field Maple,	≤ 12	≤ 290	E S	≤ 4.5 ≤ 4.5 ≤ 4.5 ≤ 4.5	N/A ≥ 0	SM	M-G	<ul> <li>Wooded copse with hedging to sides.</li> <li>Not accessed fully to inspect in detail.</li> <li>Evidently used for rearing game.</li> <li>Access tracks to south and east sides.</li> </ul>		20+	B1/2	≤ 38	≤ 3.48
W3	Ash, Birch, Field Maple, Hawthorn, Hazel, Larch, Oak, Pine	≤ 18	≤ 7x190 (ms)	E S	≤ 6 ≤ 6 ≤ 6 ≤ 6	N/A ≥ 0	SM- EM	M-G	<ul> <li>Wooded copse with hedging to sides.</li> <li>Not accessed fully to inspect in detail.</li> <li>Dense Cherry Laurel in parts.</li> </ul>	•	40+	B1/2	≤ 114	≤ 6.03

### FIGURE 10A.1 - TREE SURVEY SCHEDULE FOR ARBORICULTURAL IMPACT APPRAISAL Site: Land off Cliffhill Lane, Thoroton, Nottinghamshire, NG13 9DS Agent for Client: Neo Environmental

Surveyor:	Joseph Lambert BSc(Hons) FdSc MArborA
Survey Dates:	26 & 28 January 2022
Job Reference:	BTC2391

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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 (m²)	RPA Radius (m)
W4	Ash, Beech, Oak, Hawthorn, Scots Pine, Willow, etc.	≤ 15	≤ 400	E S	≤ 5 ≤ 5 ≤ 5 ≤ 5	N/A ≥ 0	SM- EM	G	<ul><li>Shelterbelt with hedge to west side.</li><li>Not accessed fully to inspect in detail.</li></ul>	•	40+	B1/2	≤ 72	≤ 4.8
W5	Ash, Beech, Cherry Laurel, Elm, Field Maple, Oak, Hawthorn, Scots Pine, Willow, etc.	≤ 15	≤ 420	E S	≤ 6 ≤ 6 ≤ 6 ≤ 6	N/A ≥ 0	EM	G	<ul> <li>Shelterbelt with hedge to west side.</li> <li>Not accessed fully to inspect in detail.</li> <li>Smaller scrub to north-west corner and dense Cherry Laurel down east side.</li> </ul>	•	40+	B1/2	≤ 80	≤ 5.04
W6	Ash, Crack Willow, Field Maple, Oak, etc.	≤ 25	≤ 1100	E S	≤ 11 ≤ 11 ≤ 11 ≤ 11	N/A ≥ 0	М	М	<ul> <li>Stand of mature woodland comprising predominantly Ash with some Willow and Hawthorn to edges.</li> <li>Areas of more recently established woodland of semi to early-mature planting to southern corner and north-western area.</li> <li>Dense ivy throughout, which impeded inspections of stems.</li> <li>Ash showing multiple and significant symptoms of colonisation by Ash Dieback Disease.</li> <li>Large Crack Willow immediately north of bridleway has a partially failed secondary branch and decay to main stem.</li> <li>Several failed Ash stems with multiple brackets of white rot decay causing <i>Inonotus hispidus</i> on stems overhanging moderately low usage bridleway.</li> </ul>	<ul> <li>Implement woodland management programme, to include:</li> <li>1.Risk management survey of trees within falling distances of public right of way; and</li> <li>2.Programme to remove Ash succumbing to Ash Dieback Disease and subsequent restocking with new trees of suitable native species.</li> </ul>	20+	B2/3	≤ 547	≤ 13.2
W7	Ash, Alder, Cherry Laurel, Larch, Oak, Hawthorn, Hazel, Pine, Sycamore	≤ 17	≤ 400#	E S	≤ 5 ≤ 5 ≤ 5 ≤ 5	N/A ≥ 0	SM- EM	G	<ul> <li>Mixed species wooded area with dep water filled ditch to east and south.</li> <li>Not accessed to inspect in detail.</li> </ul>	•	20+	B1/2	≤ 72	≤ 4.8
H1	Common Hawthorn	≈ 3	N/A	1.	≈ 5 wide	N/A 0	EM	G	<ul> <li>Previously cut and laid hedgerow.</li> <li>Evidently mechanically managed at approximately 2m height.</li> </ul>	•	40+	C2	N/A	≈ 1
H2	Hawthorn, Elder	≤ 4	N/A	3	≤ 3 wide	N/A 0	EM	M-G	<ul> <li>Hedgerow located along boundary below tree groups.</li> <li>Several gaps in places.</li> <li>Trimmed on field side to maintain clearance.</li> </ul>	•	10+	C1	N/A	≈ 1
Н3	Hawthorn, Dog Rose, Elder, Elm	≈ 2	N/A	1.	≤ 5 wide	N/A 0	EM		<ul> <li>Mechanically managed hedgerow with very sparse base and numerous gaps between stems.</li> <li>Some areas of dead Elm within.</li> </ul>	•	20+	C2	N/A	≈ 1

## FIGURE 10A.1 - TREE SURVEY SCHEDULE FOR ARBORICULTURAL IMPACT APPRAISAL Surveyor: Joseph Lambert BSc(Hons) FdSc MArborA Site: Land off Cliffhill Lane, Thoroton, Nottinghamshire, NG13 9DS Survey Dates: 26 & 28 January 2022 Page: 7 Agent for Client: Neo Environmental BTC2391 Page: 7

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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 (m²)	RPA Radius (m)
H4	Hawthorn, Field Maple, Dog Rose, Blackthorn	≈ 3	N/A	≤ 1.5 wide	N/A 0	EM	G	<ul> <li>Previously cut and laid hedgerow now mechanically managed at approximately 2m height.</li> <li>Several gaps within hedgerow along length.</li> </ul>	•	40+	C2	N/A	≈ 1
H5	Hawthorn, Blackthorn etc.	≈ 2	N/A	≈ 2m wide	N/A 0	м	G	<ul> <li>Mechanically managed lengths of hedgerow.</li> </ul>	<ul> <li>Remove approximately 15m of hedge in order to allow construction of access track and 4m section of hedge to allow passage of permissive footpath to east (see TIP).</li> </ul>	40+	C2	N/A	≈ 1
H6	Common Hawthorn	5	N/A	≈ 2.5 wide	N/A 0	SM	G	<ul> <li>Hedgerow along west of woodland.</li> <li>Mechanically managed on west side and previously cut and laid.</li> </ul>	•	20+	C2	N/A	≈ 1.5
H7	Common Hawthorn	2.5	N/A	≈ 2.5 wide	N/A 0	EM	G	Mechanically managed hedgerow	<ul> <li>Remove 14m of hedge to form site access (See TIP).</li> </ul>	40+	C2	N/A	≈ 1.5
H8	Common Hawthorn	≈ 3	N/A	≈ 1.5 wide	N/A 0	EM	G	<ul> <li>Previously cut and laid hedgerow and evidently mechanically managed at approximately 2m height.</li> </ul>	•	40+	C2	N/A	≈ 1
H9	Common Hawthorn	≤ 4	N/A	≈ 2.5 wide	N/A 0	SM		<ul> <li>Hedge surrounding water treatment works.</li> <li>Mechanically maintained on field side.</li> </ul>	•	20+	C2	N/A	≈ 1
H10	Hawthorn.	≈ 3	N/A	≈ 2 wide	N/A 0	EM	G	Mechanically managed hedgerow.	•	40+	C2	N/A	≈ 1
H11	Hawthorn, Elder	≤ 6	≤ 200	≈ 3.5 wide	N/A 0	EM	M-G	<ul> <li>Boundary hedgerow within and to south of ditch, possibly on neighbouring land.</li> <li>Dense ivy to parts and several large gaps within.</li> </ul>	•	40+	C2	N/A	≤ 2.4
H12	Common Hawthorn	≤ 5	≤ 100#	$ \begin{array}{l} N & \leq 2 \\ E & \leq 2 \\ S & \leq 2 \\ W & \leq 2 \end{array} $	N/A 0	SM	G	<ul> <li>Boundary hedgerow.</li> <li>Section to south evidently planted in the last 15-20 years and never laid, section to north older and previously laid.</li> <li>Previously cut at 4m height and managed on west side to clear field.</li> </ul>	•	40+	C2	N/A	≈ 1.2
H13	Ash, Hawthorn, Dog Rose	≤ 8.5	≤ 90	N ≤ 2.5 E ≤ 2.5 S ≤ 2.5 W ≤ 2.5	N/A 0	EM	М	<ul> <li>Hawthorn hedgerow with outgrown sections of Ash that has been previously laid and some dead Elm sections to east.</li> </ul>		20+	C2	N/A	≤ 2.65
H14	Hawthorn	≈ 2	N/A	≈ 2 wide	N/A 0		G	<ul> <li>Mechanically managed field hedgerow.</li> </ul>		40+	C2	N/A	≈ 1

# FIGURE 10A.1 - TREE SURVEY SCHEDULE FOR ARBORICULTURAL IMPACT APPRAISAL Surveyor: Joseph Lambert BSG(Hons) FdSc MArborA Site: Land off Cliffhill Lane, Thoroton, Nottinghamshire, NG13 9DS Survey Dates: 26 & 28 January 2022 Page: 19 of 19 Agent for Client: Neo Environmental BTC2391 Page: 19 of 19

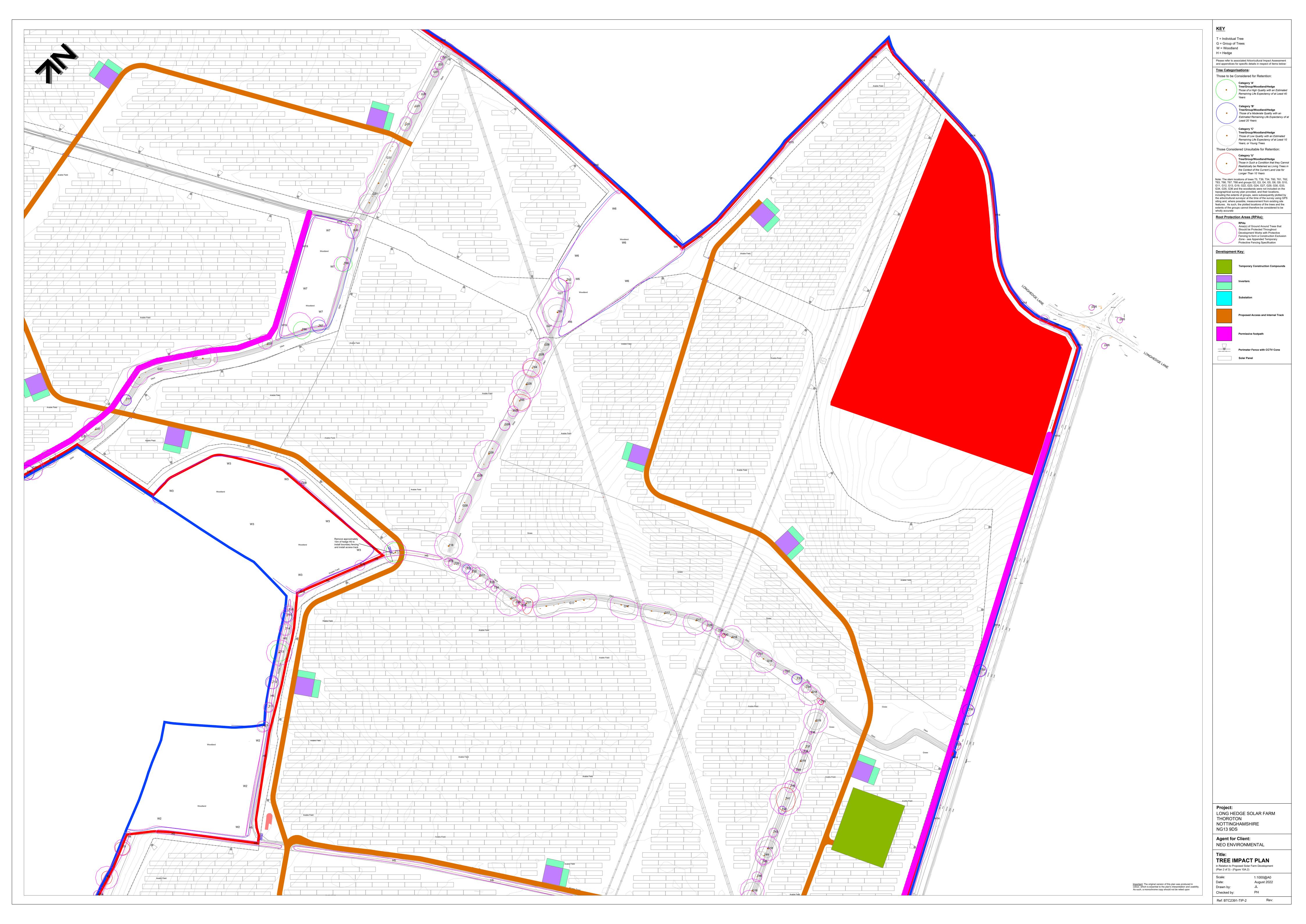
No.	Species	Height	Stem Diam.	Branch Spread	Branch & Canopy Clearances	Life Stage	PC	General Observations and Comments	Management Recommendations	ERC	Cat. Grade	RPA (m²)	RPA Radius (m)
H15	Hawthorn	2.5	N/A	≈ 2.5 wide	N/A 0	EM	G	Mechanically managed hedgerow.	•	40+	C2	N/A	≈ 1.2
H16	Common Hawthorn	≤ 6	≈ 150	N ≤2.5 E ≤2 S ≤2 W ≤2	N/A 0	EM	G	<ul> <li>Unmanaged hedgerow along boundary.</li> <li>Evidently previously historical laid.</li> <li>Mechanically managed on south side to maintain clearance to field.</li> </ul>	•	40+	C2	N/A	≈ 1.5
H17	Hawthorn	≈ 2	N/A	≈ 2.5 wide	N/A 0	EM	G	Mechanically managed hedgerow along field boundary.	•	40+	C2	N/A	≈ 1
H18	Hawthorn	≈ 2.5	N/A	≈ 1.5 wide	N/A 0	EM	G	<ul> <li>Mechanically managed roadside hedgerow which has been cut and laid within last 10 years.</li> </ul>	•	40+	C2	N/A	≈ 1
H19	Hawthorn, Hazel	≤ 6	≤ 110#	$\begin{array}{l} N & \leq 2.5 \\ E & \leq 2.5 \\ S & \leq 2.5 \\ W & \leq 2.5 \end{array}$	N/A 0	SM	G	<ul> <li>Length of hedgerow along woodland edge.</li> <li>Previously cut at approximately 1.2m height and mechanically managed on field side up to 4m height.</li> </ul>	•	20+	C2	N/A	≈ 1.5



### Appendix 10A – Figure 10A.2 Tree Impact Plans (1-3)











### Appendix 10A – Figure 10A.3 Temporary Fencing Specification



#### - TEMPORARY PROTECTIVE FENCING & GROUND PROTECTION SPECIFICATION -

**Construction Exclusion Zones (CEZs)**, shall be enclosed by **Temporary Protective Fencing** and/or, where necessary, **Temporary Ground Protection Measures**. The fencing/ground protection Type(s), locations, and extents shall be agreed, in writing, with the Local Planning Authority (LPA). In turn, the **Temporary Protective Fencing** and/or **Temporary Ground Protection Measures** shall:

- 1. be constructed as in accordance with the Type 1, Type 2 or Type 3 'Temporary Protective Fencing Construction' sections and, where applicable the 'Temporary Ground Protection Measures' section, as detailed herein and agreed, in advance with the LPA;
- 2. be retained in place throughout the development process until completion of the project, and only removed following receipt of written permission from the LPA;
- 3. be sited in the area(s) defined by the Root Protection Areas on the associated Tree Impact Plan, or as the CEZs on the Tree Protection Plan;
- 4. be erected prior to any construction, demolition or excavation works and remain in place for the duration of the project;
- 5. preclude any delivery of site accommodation and/or materials and/or plant machinery;
- 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;
- 7. preclude the storage of all development related materials and substances including fuels, oils, additives, cement and/or any other deleterious substance; and
- 8. be affixed with a 600mm x 300mm warning sign reading "TREE PROTECTION AREA KEEP OUT" (see Figure 1, below), at every 10.0 metre length of protective fencing.
- 9. <u>Important</u>: Any incursion into CEZs must be by prior arrangement, following consultation with the LPA.

Figure 1: CEZ Warning Sign

#### - TREE PROTECTION AREA -KEEP OUT!

#### (TOWN & COUNTRY PLANNING ACT 1990) THE TREES ENCLOSED BY THIS FENCE ARE PROTECTED BY PLANNING CONDITIONS AND/OR SUBJECTS OF A 'TREE PRESERVATION ORDER', THE CONTRAVENTION OF WHICH MAY LEAD TO CRIMINAL PROSECUTION

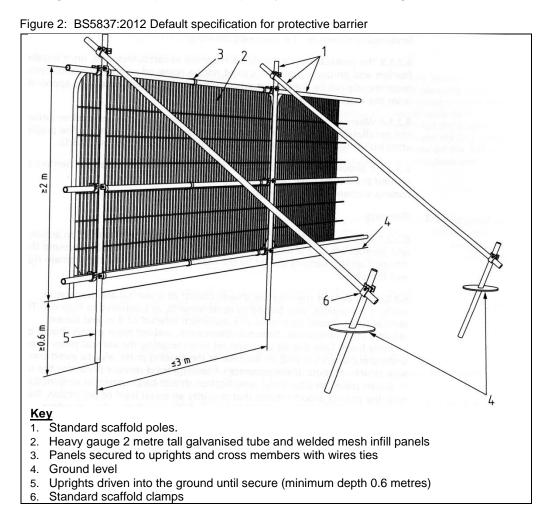
THE FOLLOWING <u>MUST</u> BE OBSERVED BY <u>ALL</u> PERSONNEL:

- THE PROTECTIVE FENCING MUST NOT BE MOVED
- NO PERSON SHALL ENTER THE CONSTRUCTION EXCLUSION ZONE
- NO MACHINE, PLANT OR VEHICLES SHALL ENTER THE EXCLUSION ZONE
- NO MATERIALS SHALL BE STORED IN THE EXCLUSION ZONE
- NO SPOIL SHALL BE DEPOSITED IN THE EXCLUSION ZONE
- NO EXCAVATION SHALL OCCUR IN THE EXCLUSION ZONE

 NO FIRES SHALL BE LIT IN THE EXCLUSION ZONE ANY INCURSION INTO THE EXCLUSION ZONE MUST BE WITH THE WRITTEN PERMISSION OF THE LOCAL PLANNING AUTHORITY

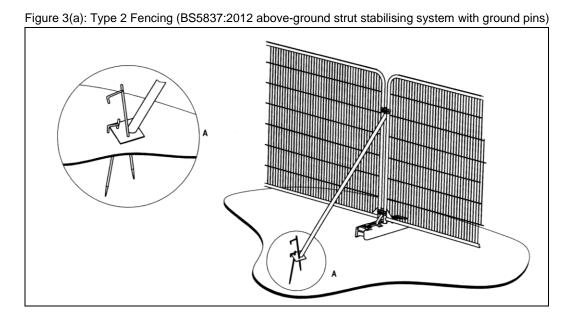
#### Type 1 (i.e. 'Default') Temporary Protective Fencing Construction (see Figure 2, below)

- 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 points 3 to 5 of Figure 2, overleaf.
- 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 points 4 to 5.
- 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) shall be fixed to every 10.0 metre length of protective fencing.
- 8. On completion of erection, and prior to any demolition or construction works, site preparation, excavation or delivery of plant and materials, the Consulting Arboriculturist or the LPA Tree Officer, as agreed, shall inspect the Temporary Protective Fencing.



#### **Type 2 Temporary Protective Fencing Construction** (see Figure 3(a), below)

- 1. Temporary protective fencing panels shall be weldmesh "Heras" panels of at least 2.0 metres in height.
- 2. The panels shall stand on rubber or concrete feet.
- 3. The panels shall butt together, and be joined together using a minimum of two anti-tamper couplers, installed so that they can only be removed from inside the fence.
- 4. The distance between the fence couplers shall be at least 1.0 metre, and shall be uniform throughout the fence.
- 5. The panels shall be supported on the inner side by stabiliser struts, which shall be clamped to the scaffold framework at a 45° angle and extend back into the CEZ and shall be attached to a base plate, which shall be secured to the ground with pins (Figure 3a).
- 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) shall be fixed to every 10.0 metre length of protective fencing.
- 8. On completion of erection, and prior to any demolition or construction works, site preparation, excavation or delivery of plant and materials, the Consulting Arboriculturist or the LPA Tree Officer, as agreed, shall inspect the Temporary Protective Fencing.

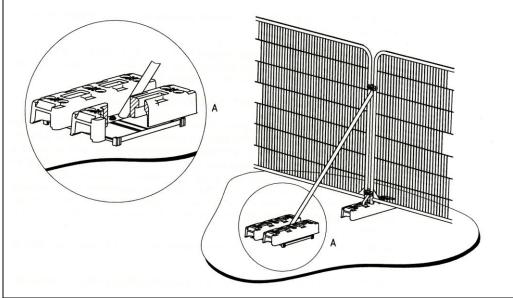


#### Type 3 Temporary Protective Fencing Construction (see Figure 3(b), overleaf)

- 1. Temporary protective fencing panels shall be weldmesh "Heras" panels of at least 2.0 metres in height.
- 2. The panels shall stand on rubber or concrete feet.
- 3. The panels shall butt together, and be joined together using a minimum of two anti-tamper couplers, installed so that they can only be removed from inside the fence.
- 4. The distance between the fence couplers shall be at least 1.0 metre, and shall be uniform throughout the fence.
- 5. The panels shall be supported on the inner side by stabiliser struts, which shall be clamped to the scaffold framework at a 45° angle and extend back into the CEZ and shall be attached to a block tray base (Figure 3b).
- 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) shall be fixed to every 10.0 metre length of protective fencing.
- 8. On completion of erection, and prior to any demolition or construction works, site preparation, excavation or delivery of plant and materials, the Consulting Arboriculturist or the LPA Tree Officer, as agreed, shall inspect the Temporary Protective Fencing.

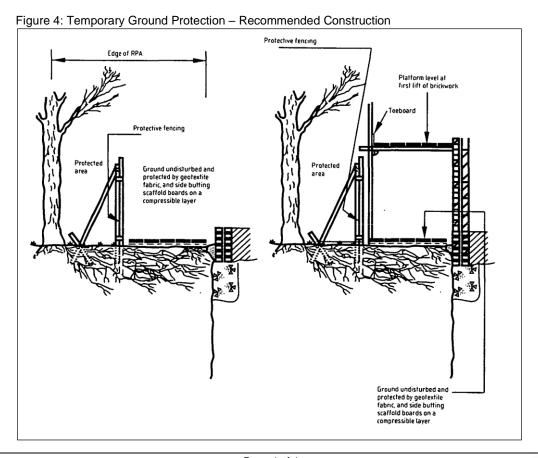


Figure 3(b): Type 3 Fencing (BS5837:2012 above-ground stabilising system with strut on block tray)



#### **Temporary Ground Protection**

- 1. Any necessary Temporary Ground Protection areas shall conform to Figure 4, below, unless otherwise agreed with the LPA.
- 2. The Ground Protection Area shall be left undisturbed and covered by a semi-permeable geotextile membrane which shall, in turn, be covered by a compressible layer consisting of a material such as woodchip.
- 3. Side-butting scaffold boards shall then be fitted to cover the Ground Protection Area.
- 4. On completion of installation, and prior to any demolition or construction works, site preparation, excavation or delivery of plant and materials, the Consulting Arboriculturist or the LPA Tree Officer, as agreed, shall inspect the Temporary Ground Protection.
- 5. The Temporary Ground Protection shall remain in place until completion of the project and only removed following receipt of written permission from the LPA.





### Appendix 10A – Figure 10A.4 Manufacturer's Brochure for Cellular Confinement System





### GEOWEB®

### TREE ROOT PROTECTION (TRP) SYSTEM

Powered by GEOSYSTEMS® technology.



The second se

defining **Green** in cellular confinement



### THE PROBLEM CONSTRUCTION-RELATED TREE DAMAGE

Critical Root Zone/Tree Protection Zone is the minimum area beneath a tree that must remain undisturbed to preserve a sufficient amount of root mass in order to give a tree a chance of survival.

When construction equipment and vehicles intrude a tree's Critical Root Zone, they can cause negative impacts to the soil environment including compaction of the soil, damage to near-surface roots and ultimately endanger the structural integrity of the tree. The majority of a tree's root system is contained within the top three feet of the surface, and construction excavation and compaction can damage or even destroy roots to the point where trees may not survive.

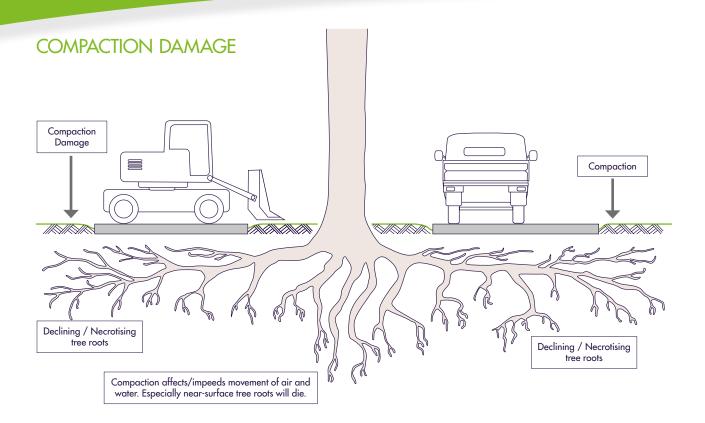
Tree Root Protection (TRP) systems should be eco-friendly as well as comply with local standards and regulations.\*

#### \*Compliance with Standards:

In the United Kingdom, Tree Root Protection systems must comply with the Arboricultural Method Statement as outlined in BS5837:2005 and may require supervision by an Arboriculturist.







### THE GEOWEB<sup>®</sup> SOLUTION TREE ROOT PROTECTION (TRP) SYSTEM

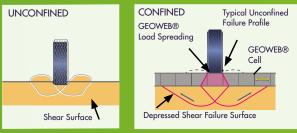
Used extensively in civil engineering construction for over 30 years, the GEOWEB® system is a three-dimensional structure that:

- provides strength to confined soils
- distributes loads laterally, not vertically
- reduces point loads
- reduces compaction of the subsoil

Manufactured from high quality, high-strength polyethylene with a textured surface and perforated walls, GEOWEB<sup>®</sup> cells with selected infill control shearing, lateral and vertical movement, and reduce subbase depth requirements.

The GEOWEB<sup>®</sup> system is a low impact development (LID) solution with exceptional load-bearing capabilities and environmental benefits. The system has a long history of solving heavy load support problems for roadways, road base support, parking lots, road shoulders, ports, trucking/intermodal terminals and railroads.

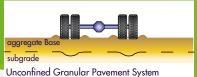


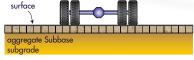


#### LOAD DISTRIBUTION

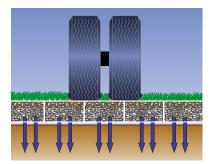
By distributing and bridging applied loads, the GEOWEB<sup>®</sup> TRP system reduces vertical stresses that are typically applied to the underlying soil and root zone.

The GEOWEB<sup>®</sup> system is ideally suited for tree root protection applications where weak subsoil or no-dig restrictions exist.





the GEOWEB® Granular Pavement System





#### COST BENEFITS

The GEOWEB® TRP system is an economical solution for reducing construction vehicle impact to the tree root zone compared with other methods. Once installed, the system has minimal-to-no visibility.

#### ENVIRONMENTAL BENEFITS

With permeable infill (topsoil/vegetation, aggregate, sand), perforated GEOWEB® cell walls offer environmental benefits:

- water infiltration
- lateral movement of air and water
- water and nutrient migration
- promotes root development

The tree root protection system can be a temporary or permanent solution.

### GEOWEB<sup>®</sup> TRP SYSTEM INSTALLATION

Step 1: Remove the upper grass and soft soils by hand or by machine if acceptable.

Step 2: Install a high-strength woven geotextile allowing adequate drainage as a separation layer between soft subgrade and GEOWEB<sup>®</sup> infill material.

Step 3: Expand GEOWEB<sup>®</sup> sections over the area to be protected and use temporary stakes or weights to hold sections open to prevent movement during infilling.

Step 4: Connect adjacent sections using ATRA® Keys. Position the sections so the slots are aligned, insert the key and turn 90 degrees locking the panels together. ATRA® Keys provide a long-term connection that is safer, quicker and stronger than staples or cable ties. In environmentally protected areas (SSSI in United Kingdom), ATRA® Keys can be used without the requirement for diesel-fueled compressors.

Step 5: For permeability, infill the fully connected GEOWEB<sup>®</sup> system with a well graded, crushed, angular stone such as MOT Type 1X (also known as MOT Type3). Over fill the cells by up to 30mm to allow for compaction.

Step 6: Compact the fill material with conventional plant or non-vibratory plant when required. Fill should be maintained above the GEOWEB® system by a minimum of 10mm at all times or a permanent wearing course of blocks, porous asphalt or gravel installed.



#### DESIGN CONSIDERATIONS

It is important to ensure the correct GEOWEB® cell size and cell depth are specified and installed based on the anticipated pavement loads. These are calculated based on the following criteria:

- traffic type and loading
- frequency of traffic
- subgrade strength (typically CBR, Ev2, Cu or SPT values)
- infill type
- allowable settlement of the pavement



To assist you in determining the correct GEOWEB® solution for your application, Presto GEOSYSTEMS® or their network of distributors/representatives can assist with the calculation for your project. You can be confident that you will receive the most suitable and economical solution for your project.

PRESTO GEOSYSTEMS<sup>®</sup> COMMITMENT — To provide the highest quality products and solutions.

Presto GEOSYSTEMS<sup>®</sup> is committed to helping you apply the best solutions for your tree root protection needs. Our solutions-focused approach to solving problems adds value to every project. Rely on the leaders in the industry when you need a solution that is right for your application. Contact Presto GEOSYSTEMS<sup>®</sup> or our worldwide network of knowledgeable distributors/representatives for assistance.



PRESTO GEOSYSTEMS<sup>®</sup> Appleton, Wisconsin, USA

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### Appendix 10B – Disclaimer



#### Appendix 10B

#### 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 coordination. 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.

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Statutory Tree Protection: It is the client's responsibility to check for the presence of any statutory tree protection measures, such as the site's location within a Conservation Area and/or the presence of any Tree Preservation Orders, directly with the applicable Council's planning department prior to scheduling or carrying out any tree works. In turn, it is also the client's responsibility to check for the need for a felling licence with the Forestry Commission prior to scheduling or carrying out any tree works. Bowland Tree Consultancy Ltd cannot be held responsible for any decisions made by the client to prune or remove trees where any such statutory protection exists.

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Validity: The findings and recommendations contained within this report are, providing its recommendations are observed and the site conditions are retained as per the date(s) of the survey, valid for a period of twelve months from the last survey date. This period of validity may be reduced should there be any changes in factors affecting both the surrounding environment and/or built structures in relative proximity to the trees. The condition of trees should be re-appraised directly, through a site survey, following major weather events such as storms, changes undertaken to the site's conditions, inclusive of demolition and/or ground works, or the removal of existing site vegetation, including trees.



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