

BRITISH STANDARD 5837

TREE INVENTORIES AND RISK ASSESSMENTS

TREE SURVEYS ARBORICULTURAL IMPLICATION STUDIES

WOODLAND MANAGEMENT PLANS

TPO/PLANNING ADVICE/ PROJECT MANAGEMENT

TREE PLANTING SCHEMES

TPO RE-SURVEY



ARBORICULTURAL IMPLICATIONS ASSESSMENT

PROPOSED DEVELOPMENT

AT

THE AGEAS BOWL
SOUTHAMPTON

Author: C. Salisbury
Date: 24 June 2022
Ref: TRE/TABS/Rev D



Mulberry

Adamson House, Towers Business Park, Wilmslow Road, Didsbury, M20 2YY

T 0161 955 3628

F 0161 955 4201

E info@mulberrytmc.co.uk

www.mulberrytmc.co.uk

1.0 Introduction

- 1.1 Mulberry Tree Management were instructed by Land Advisory, to carry out an arboricultural survey of trees at their site in Marshall Drive, Southampton.
- 1.2 This report details the arboricultural implications of developing the site, including:
 - a survey of the trees on and near the development which may impact the proposal from ground level, noting their location, species and all relevant parameters, i.e. stem diameter, height, crown spread, condition etc;
 - providing advice on the removal, retention and management of trees;
 - assessment of the potential effects of the proposal on retained trees and vice versa;
 - assessment of the requirement for tree protection for the duration of the works;
 - mitigation for any loss;
 - preparation of a tree schedule;
 - and report on the above matters.
- 1.3 The survey was carried out on 18 February 2022 by means of inspection from ground level by an experienced and qualified arboriculturalist. The inspection can be restricted in cases where trees were Ivy clad or surrounded by vegetation.
- 1.4 Under *BS5837: 2012 Trees in Relation to Construction - Recommendations*, the assessment of trees is made objectively. The tree categorisation method identifies the quality and value of the existing tree stock, allowing informed decisions to be made concerning development design layout.
- 1.5 The following documents have been made available by the client:
 - Drawing- topo2021.dwg
 - Drawing- J00828 LANDSCAPE MODEL_DRAFT 2022-06-14.dwg
- 1.6 The supplied drawing included some tree positions plotted. Any dimensions regarding tree positions and protective fencing must be checked on site.
- 1.7 Weather conditions during the survey were wet and windy.
- 1.8 The survey was carried out noting the conditions of the trees at the time of inspection. As trees are part of the natural environment, conditions can naturally change; therefore the contents of this report are valid for one year only. After this period, re-inspection may be necessary.

2.0 Survey Methodology

- 2.1 The trees were surveyed (prefixed T, or G for group) and recorded in the tree schedule in appendix one. Where groups are recorded, average height and diameter at breast height (DBH) of the trees in the group are reported. Where access to the base of any trees was limited, stem size was estimated.
- 2.2 All the trees were assessed using: a grading A to C (retention) and U (removal); condition and age class as defined in appendix two.
- 2.3 Where appropriate, canopy spread for each tree was recorded at four cardinal points in order to reproduce an accurate representation of the crown shape of the tree on the tree plan in appendix three.
- 2.4 The survey included all trees within the proposal area and trees near to the proposal.
- 2.5 Sight lines were difficult to establish during the survey due to the dense vegetation hence trees were grouped appropriately.

3.0 Development Proposals

- 3.1 Due to the proposed development and its associated infrastructure there are a number of locations where the proposals are in close proximity to the trees surveyed. The Site Layout Plan within appendix three identifies the trees in relation to the proposed development.
- 3.2 In order to fully assess the impact of the proposals an Impact Table has been created detailing each tree, which shows the proximity of the associated works to the tree.
- 3.3 This can then be assessed in accordance with BS 5837:2012 to determine whether the development will have a detrimental impact on the health of each tree. Once this has been determined remedial measures can be detailed to reduce the impact the proposals will have on the treescape.
- 3.4 To assist in the consideration of the application the impacts have been broken down into each of their character areas.

3.5 Character Area 1

Tree No.	Root Protection Area identified in Table 2 of BS 5837:2012	Distance to Proposed Hard Standing (m)	Distance to Proposed Development (m)	Can the Tree/s be Successfully Retained
T1	132m ²	3.90	132.50	No
T2	290m ²	10.50	145.60	Yes
T3	92m ²	11.50	152.80	Yes
T4	275m ²	11.30	162.60	Yes
T5	290m ²	13.00	171.80	Yes
T6	408m ²	13.90	182.00	Yes
G7	26m ²	2.40	133.20	Yes
T8	72m ²	1.30	124.00	No
T9	35m ²	2.40	117.90	No
G10	20m ²	6.70	120.50	Yes
G11	9m ²	11.60	115.10	Yes
G12	350m ²	7.90	112.90	Yes as outlined in section 5.1
G13	163m ²	7.20	100.90	Yes
G14	366m ²	11.40	92.80	Yes as outlined in section 5.1
G15	24m ²	1.20	32.40	Yes as outlined in section 5.1
G16	72m ²	2.60	36.60	Yes as outlined in section 5.1
T17	222m ²	1.90	59.90	No
G18	Fell Due to Direct Impact of Development			
T19	191m ²	12.50	62.90	Yes
G20	41m ²	0.90	19.70	Part Retain as outlined in section 5.1/Part Remove
G20a	72m ²	7.40	7.10	Yes
T21	319m ²	7.10	42.00	Yes as outlined in section 5.1
T22	142m ²	3.00	39.40	No
T23	92m ²	1.20	37.60	No
T24	Fell Due to Direct Impact of Development			
T25	255m ²	7.00	37.70	Yes as outlined in section 5.1
T26	Not Assessed as the Tree Requires Removal Due to its Condition			
G27	Fell Due to Direct Impact of Development			
G28	7m ²	4.60	5.00	Yes
T29	282m ²	7.60	7.60	Yes as outlined in sections 5.1 & 5.2
T30	180m ²	12.60	12.60	Yes
T31	113m ²	14.40	14.40	Yes
G32	163m ²	18.10	18.10	Yes
G33a	92m ²	20.20	27.50	Yes

Tree No.	Root Protection Area identified in Table 2 of BS 5837:2012	Distance to Proposed Hard Standing (m)	Distance to Proposed Development (m)	Can the Tree/s be Successfully Retained
G33b	147m ²	16.50	21.80	Yes
G33c	72m ²	15.40	18.30	Yes
T34	Not Assessed as the Tree Requires Removal Due to its Condition			
G35	Fell Due to Direct Impact of Development			
G36	Fell Due to Direct Impact of Development			
G37	31m ²	N/A	N/A	Yes

3.6 Character Area 2 & 3

Tree No.	Root Protection Area identified in Table 2 of BS 5837:2012	Distance to Proposed Hard Standing (m)	Distance to Proposed Development (m)	Can the Tree/s be Successfully Retained
T58	255m ²	N/A	72.10	Yes
T59	113m ²	N/A	64.30	Yes
T60	707m ²	N/A	51.20	Yes
T61	Not Assessed as the Tree Requires Removal Due to its Condition			
T62	Not Assessed as the Tree Requires Removal Due to its Condition			

3.7 Character Area 4

Tree No.	Root Protection Area identified in Table 2 of BS 5837:2012	Distance to Proposed Hard Standing (m)	Distance to Proposed Development (m)	Can the Tree/s be Successfully Retained
W1	500m ²	7.20	14.70	Yes
W1n	662m ²	29.30	19.50	Yes
W1o	342m ²	31.70	27.20	Yes
W1p	547m ²	8.80	41.10	Yes as outlined in section 5.3
W1q	707m ²	8.50	47.30	Yes as outlined in section 5.3
W1r	480m ²	13.80	31.80	Yes
W1s	304m ²	17.80	24.90	Yes
W1t	557m ²	25.90	18.50	Yes
G37	31m ²	7.60	10.00	Yes
T52	104m ²	1.70	1.60	No
T53	312m ²	10.20	11.10	Yes
G54	28m ²	1.10	14.20	Yes with the loss of a small section
G55	Fell Due to Direct Impact of Development			
G56	113m ²	1.90	77.90	Yes as outlined in section 5.1
G57	191m ²	1.70	97.20	Yes as outlined in section 5.1

3.8 Character Area 5

Tree No.	Root Protection Area identified in Table 2 of BS 5837:2012	Distance to Proposed Hard Standing (m)	Distance to Proposed Development (m)	Can the Tree/s be Successfully Retained
W1	500m ²	3.40	3.40	Yes
W1b	Not Assessed as the Tree Requires Removal Due to its Condition			
W1c	28m ²	2.60	2.60	Yes as outlined in section 5.2
W1d	480m ²	10.80	10.80	Yes as outlined in section 5.1
W1e	499m ²	12.80	21.40	Yes
W1f	366m ²	13.40	28.00	Yes
W1g	366m ²	4.40	16.80	Yes as outlined in section 5.1
W1h	366m ²	21.00	42.60	Yes
W1i	452m ²	37.60	60.60	Yes
W1j	248m ²	56.40	79.60	Yes
W1k	327m ²	12.00	55.20	Yes
W1l	327m ²	10.40	47.80	Yes
W1m	335m ²	5.80	35.60	Yes
G37	31m ²	1.80	7.40	Yes
G37a	Not Assessed as the Trees Require Removal Due to their Condition			
G37b	Not Assessed as the Trees Require Removal Due to their Condition			
G37c	Not Assessed as the Trees Require Removal Due to their Condition			
G37d	Not Assessed as the Trees Require Removal Due to their Condition			
G38	92m ²	5.60	12.00	Yes with the loss of a small section
G39	41m ²	11.30	31.40	Yes
G40	38m ²	13.10	44.60	Yes
G41	18m ²	10.20	31.40	Yes
G42	22m ²	12.10	12.10	Yes
T43	59m ²	16.80	11.50	Yes
G44	35m ²	7.20	8.20	Yes
T45	304m ²	10.00	12.40	Yes
T46	113m ²	10.00	16.90	Yes
G47	222m ²	5.80	13.40	Yes
T48	452m ²	6.90	15.50	Yes
T49	222m ²	11.30	21.90	Yes
T50	452m ²	9.40	24.60	Yes as outlined in section 5.1
T51	366m ²	1.10	27.20	Yes as outlined in section 5.1

4.0 Impact Assessment

4.1 To assess the implications of the Impact Table each tree can be categorised in the following way. Again, to assist this has been broken down into each character area: -

4.2 Character Area 1 & 2

	Trees to be retained		Trees to be removed	
	With No Impact	With detailed construction	Due to Condition	Due to Development
Tree No.	T2, T3, T4, T5, T6, G7, G10, G11, G13, T19, G20a, G28, T30, T31, G32, G33a, G33b, G33c & G37	G12, G14, G15, G16, G20(part), T21, T25 & T29	T26 & T34	T1, T8, T9, T17, G18, G20(part), T22, T23, T24, G27, G35 & G36

4.3 Character Area 3

	Trees to be retained		Trees to be removed	
	With No Impact	With detailed construction	Due to Condition	Due to Development
Tree No.	T58, T59 & T60	N/A	T61 & T62	N/A

4.4 Character Area 4

	Trees to be retained		Trees to be removed	
	With No Impact	With detailed construction	Due to Condition	Due to Development
Tree No.	W1, W1n, W1o, W1r, W1s, W1t, G37, T53 & G54	W1p, W1q, G56 & G57	N/A	T52, G54(small section) & G55

4.5 Character Area 5

	Trees to be retained		Trees to be removed	
	With No Impact	With detailed construction	Due to Condition	Due to Development
Tree No.	W1, W1e, W1f, W1h, W1i, W1j, W1k, W1l, W1m, G37, G38, G39, G40, G41, G42, T43, G44, T45, T46, G47, T48 & T49	W1c, W1d, W1g, T50 & T51	W1b, G37a, G37b, G37c & G37d	G38(small section)

5.0 Mitigation Proposals

5.1 Hard Standing

5.1.1 The impact table shows the proposed car parking having a minor encroachment into the root protection area of G12, G14, G15, G16, G20, T21, T25, T29, G56, G57, W1d, W1g, T50 & T51. It is felt that due to the species, condition and limited extent of encroachment the proposal will not have a detrimental impact on the safe useful life expectancy of these trees.

5.1.2 If ground levels remain the same, the detrimental effects the driveway would have on this tree would be: -

- Compaction, resulting in oxygen depletion, caused from creating the access way.
- The loss of a permeable surface.

5.1.3 It is now possible with the use of a cellular confinement system to be able to create road surfaces very close to trees without having a detrimental effect.

5.1.4 A cellular confinement system provides a load transfer mattress which prevents direct loads on tree roots and reduces the bearing pressure on subsoil's by stabilising aggregate surfaces against rutting under wheel loads.

5.1.5 Section 7.4.2.3 of BS 5837:2012 advises that new permanent hard surfacing should not exceed 20% of any existing unsurfaced ground within the RPA. The table below details the amount of new surface proposed within the RPA of each tree.

Tree No	Total Area m2 of RPA	Total m2 of New Hard Surfacing within the RPA	Percentage of Hard Surfacing within the RPA
G12	350	40.40	11.60
G14	366	48.50	13.30
G15	24	1.10	4.60
G16	72	4.70	6.60
G20	41	7.90	19.30
T21	319	36.90	11.60
T25	255	50.60	19.90
T29	282	24.70	8.80
G56	113	31.10	27.60
G57	191	16.40	8.80
W1d	480	20.60	4.30
W1g	366	34.40	9.40
T50	452	50.80	11.30
T51	366	169.20	46.30

5.1.6 As you can see from the table, with the exception of G56 & T51 the proposed hard surfacing does not exceed 20% for each of the RPA's. It is therefore felt that the proposed driveway will not have a detrimental impact upon the existing trees.

5.2 Construction Works

5.1.1 The impact table shows the proposed development having a minor encroachment into the root protection area of T29 & W1c. It is felt that due to the species, condition and limited extent of encroachment the proposal will not have a detrimental impact on the safe useful life expectancy of these trees.

5.1.2 Section 7.5.3 of BS 5837:2012 advises that where a slab or minor structure is to be formed within the RPA it should not exceed 20% of any existing unsurfaced ground. The table below details the amount of encroachment within the RPA.

Tree No	Total Area m2 of RPA	Total m2 of Structure within the RPA	Percentage of Structure within the RPA
T29	282	24.70	8.80
W1c	28	0.40	1.50

5.1.3 As you can see from the table above the proposed structure does not exceed 20% of the RPA. It is therefore felt that the proposed development will not have a detrimental impact upon the existing trees.

5.3 Proposed Path

- 5.3.1 The impact table also shows a proposed path having a minor encroachment into the root protection area of W1p & W1q. This footpath is informal in nature and will be of a sympathetic construction not requiring any works that will have a detrimental impact on the two trees. It is therefore felt that due to the species, condition and limited extent of encroachment the proposal will not have a detrimental impact on the safe useful life expectancy of these trees.

5.4 Compensatory Planting

- 5.4.1 Due to the loss of the trees identified in section 3.4 it is proposed that along with the general soft landscaping for the development, supplementary tree planting will support the application.
- 5.4.2 This will have a number of benefits for the development and the character of the area. These being:-
- Give a greater diversity of age class on the site; increasing sustainability.
 - Give a greater diversity of species and therefore wildlife habitat.
- 5.4.3 The proposed landscaping is to be submitted to support the application.

6.0 Conclusions and Arboricultural Recommendations

- 6.1 The tree categorisation method identifies the quality and value of the existing tree stock but it is not meant to be interpreted rigidly and is presented in order to form a balanced judgement on tree retention and removal.
- 6.2 A precautionary method of working near trees is detailed in the accompanying Arboricultural Method Statement.
- 6.3 Following site development, regular (annual or biannual) inspections of all retained trees should be undertaken by a qualified Arboricultural Consultant.
- 6.4 It is considered that in following the advice in this document, any negative factors affecting trees on the site will be minimised.

Appendix One

Tree Survey Schedule

BS5837:2012 TREE SCHEDULE



DATE OF SURVEY: 18/02/2022

JOB REFERENCE: MTM0171.AIA.01

SITE ADDRESS: The Ageas Bowl

Tree No.	Species	Stem Dia (mm)	RPA (m ²)	RPA Radius (m)	Height (m)	Age Class	Crown Spread (m)				Crown Clearance (m)	Condition	Comments	Recommendations	Remaining Contribution	BS5837 Retention Category
							N	E	S	W						
T1	Oak	540	132	6.48	11	EM	4	3	8	5	1S	A	Located in woodland belt at base of bank adjacent to access road. Highly visible from public viewpoints. Asymmetrical crown due to adjacent trees	No action	80+	B2
T2	Oak	800	290	9.6	14	M	5	9	10	7	1S	B	Located within wider woodland belt. Reduced vitality. Asymmetrical crown. Deadwood and dieback. Acceptable condition. Good environmental benefit.	No action	40+	A3
T3	Beech	450	92	5.4	12	EM	5	3	7	4	1S	A	Located in wider woodland belt. Good vitality. Codominant form.	No action	40+	B2
T4	Oak	780	275	9.36	14	EM	3	5	8	5	2S	A	Asymmetrical crown. Good vitality. Located in wider woodland group.	No action	40+	B2
T5	Oak	800	290	9.6	14	M	5	7	8	6	2S	A	Located in wider woodland belt. Good form and vitality.	No action	80+	A1
T6	Oak	950	408	11.4	15	M	9	9	10	7	1S	A	Located in wider woodland belt. Good form and vitality.	No action	80+	A1
G7	Beech. Birch. Pine. Oak.	240	26	2.88	14	SM	2	2	2	2	3N	A to C	A linear woodland belt. Dead and leaning trees present.	Remove dead and leaning trees within falling distance of road	80+	B2
T8#	Beech	400	72	4.8	13	SM	5	5	3	2	5N	B	Stem belled. Minor deadwood. Estimated position.	No action	20+	B1
T9#	Hawthorn	280	35	3.36	4	EM	2.5	2.5	2.5	2.5	0N	A	Multi stemmed from ground level. Good vitality. Suppressed.	No action	20+	C1
G10#	Beech x 2	210	20	2.52	13	SM	3	3	3	3	0S	A	Good form and vitality. Located adjacent to street lamp.	No action	40+	B2
G11#	Oak x 2	140	9	1.68	10	SM	1.5	1.5	1.5	1.5	2E	A	A group of 2 trees adjacent to road.	No action	40+	C2

BS5837:2012 TREE SCHEDULE



DATE OF SURVEY: 18/02/2022

JOB REFERENCE: MTM0171.AIA.01

SITE ADDRESS: The Ageas Bowl

Tree No.	Species	Stem Dia (mm)	RPA (m ²)	RPA Radius (m)	Height (m)	Age Class	Crown Spread (m)				Crown Clearance (m)	Condition	Comments	Recommendations	Remaining Contribution	BS5837 Retention Category
							N	E	S	W						
G12	Oak x 2	880	350	10.56	17	M	8	8	8	6	3S	A	Located at base of bank adjacent to road. Good vitality. No significant risk features observed.	No action	80+	A2
G13	Oak x 3	600	163	7.2	12	EM	5	5	6	5	1S	A	Ivy clad. Limited inspection. Good vitality. Trees appear stable. Highly visible from public viewpoints.	No action	40+	A2
G14	Oak x 3	900	366	10.8	13	M	6	6	6	6	4S	B	Reduced vitality. Ivy prevented a detailed inspection. Dieback and deadwood. Acceptable condition. Highly visible from public viewpoints.	Strip Ivy from eastern most Oak and inspect base	40+	B2
G15	Mixed	230	24	2.76	9	Y to SM	3	4	4	4	0N	A to B	Located on bank. Acceptable condition.	No action	40+	C2
G16	Poplar x 3	400	72	4.8	10	SM	5	5	5	5	1E	B	Codominant form. Stems leans. Good vitality.	No action	40+	B2
T17	Oak	700	222	8.4	14	EM	2	5	5	4	4S	A	Ivy on stem limited inspection. Good vitality. Asymmetrical crown.	No action	40+	B2
G18	Oak x 5	350	55	4.2	13	EM	3	5	5	5	1S	B	Stem decay at base of 1 tree. Asymmetrical crown due to adjacent trees. Acceptable condition.	No action	40+	B2
T19	Oak	650	191	7.8	15	EM	6	6	6	6	6S	A	Estimated measurements. No access to inspect. Good vitality.	No action	40+	B1
G20	Pine. Oak. Ash	300	41	3.6	15	SM	3.5	3.5	3.5	3.5	10N	A to B	Pine stand. Good vitality. Some Ash and oak within woodland.	No action	40+	B2
G20a	Pine. Oak. Ash	400	72	4.8	15	SM	3.5	3.5	3.5	3.5	10N	A to B	Pine stand. Good vitality. Some Ash and oak within woodland.	No action	40+	B2

BS5837:2012 TREE SCHEDULE



DATE OF SURVEY: 18/02/2022

JOB REFERENCE: MTM0171.AIA.01

SITE ADDRESS: The Ageas Bowl

Tree No.	Species	Stem Dia (mm)	RPA (m ²)	RPA Radius (m)	Height (m)	Age Class	Crown Spread (m)				Crown Clearance (m)	Condition	Comments	Recommendations	Remaining Contribution	BS5837 Retention Category
							N	E	S	W						
T21	Oak	840	319	10.08	15	EM	8	3	4	10	7W	A	Located within larger woodland. Good vitality. Asymmetrical crown due to adjacent trees. Acceptable condition.	No action	80+	B2
T22	Sycamore	560	142	6.72	15	EM	4	2	4	6	3W	B	Codominant form. Basal included union. Acceptable condition.	No action	40+	B2
T23	Sycamore	450	92	5.4	15	EM	2	3	4	6	3S	A	Good form and vitality. Located within broader woodland setting.	No action	40+	B2
T24	Sweet Chestnut	880	350	10.56	15	EM	3	4	4	8	1E	A	Multi stemmed from ground level. Good vitality.	No action	80+	B2
T25	Sweet chestnut	750	255	9	9	EM	7	7	4	4	3E	B	Reduce vitality. Multi stemmed from ground level.	No action	20+	B2
T26	Oak	420	80	5.04	14	SM	3	3	3	3	5N	C	In extensive decline.	Remove	Less than 10	U
G27	Oak x 3	390	69	4.68	14	EM	3	3	3	3	3S	B to C	In decline. Dieback in upper crowns.	Inspect annually	10+	C2
G28	Mixed Species	120	7	1.44	6	Y to SM	3	3	3	3	0N	A	Newly established mixed woodland planting.	No action	40+	C2
T29	Oak	790	282	9.48	14	EM	4	7	6	5	1S	A	Codominant form. Good vitality. Asymmetrical crown due to adjacent trees.	No action	40+	B2
T30	Oak	630	180	7.56	15	EM	3	2	9	4	2S	A	Good vitality. Asymmetrical crown due to adjacent trees. Located within broader woodland.	No action	80+	B2
T31	Oak	500	113	6	15	EM	3	3	9	3	3S	A	Asymmetrical crown due to adjacent trees. Located within broader woodland.	No action	80+	B2

BS5837:2012 TREE SCHEDULE



DATE OF SURVEY: 18/02/2022

JOB REFERENCE: MTM0171.AIA.01

SITE ADDRESS: The Ageas Bowl

Tree No.	Species	Stem Dia (mm)	RPA (m ²)	RPA Radius (m)	Height (m)	Age Class	Crown Spread (m)				Crown Clearance (m)	Condition	Comments	Recommendations	Remaining Contribution	BS5837 Retention Category
							N	E	S	W						
G32	Ash x 3	600	163	7.2	13	EM	2	3	10	4	1S	B	A group of 3 Ash. Historically coppiced. Snapped limbs resting on ground. Decay present in base. Trees appear stable.	Monitor stability annually	40+	B3
G33a	Oak x 3	450	92	5.4	12	EM	4	4	7	4	2S	A	Good form and vitality. No significant risk features observed.	No action	40+	B2
G33b	Oak x 2	570	147	6.84	12	EM	4	4	7	4	2S	A	Good form and vitality. No significant risk features observed.	No action	40+	B2
G33c	Oak x 1	400	72	4.8	12	EM	4	4	7	4	2S	A	Good form and vitality. No significant risk features observed.	No action	40+	B2
T34	Ash	500	113	6	12	EM	3	2	8	3	3S	C	In extensive decline.	Remove	Less than 10	U
G35	Mixed	60	2	0.72	3	Y	0.5	0.5	0.5	0.5	0N	A	Various new plantings around site. Easily replaced or transplanted.	No action	40+	C1
G36	London Plane	100	5	1.2	6	Y to SM	2.5	2.5	2.5	2.5	2N	A	Newly established. Located in formal planting area adjacent to car park. Acceptable condition. Easily replaced	No action	40+	C2
G37	London Plane	260	31	3.12	8	SM	4.5	4.5	4.5	4.5	2N	B	Commemorative trees located in grassed area adjacent to internal access road. Some trees showing signs of decline.	No action	40+	B2
G37a	London Plane	260	31	3.12	4	SM	4.5	4.5	4.5	4.5	2N	D	Commemorative trees located in grassed area adjacent to internal access road.	No action	Less than 10	U
G37b	London Plane	260	31	3.12	5	SM	4.5	4.5	4.5	4.5	2N	D	Commemorative trees located in grassed area adjacent to internal access road.	No action	Less than 10	U

BS5837:2012 TREE SCHEDULE



DATE OF SURVEY: 18/02/2022

JOB REFERENCE: MTM0171.AIA.01

SITE ADDRESS: The Ageas Bowl

Tree No.	Species	Stem Dia (mm)	RPA (m ²)	RPA Radius (m)	Height (m)	Age Class	Crown Spread (m)				Crown Clearance (m)	Condition	Comments	Recommendations	Remaining Contribution	BS5837 Retention Category
							N	E	S	W						
G37c	London Plane	260	31	3.12	6	SM	4.5	4.5	4.5	4.5	2N	D	Commemorative trees located in grassed area adjacent to internal access road.	No action	Less than 10	U
G37d	London Plane	260	31	3.12	7	SM	4.5	4.5	4.5	4.5	2N	D	Commemorative trees located in grassed area adjacent to internal access road.	No action	Less than 10	U
G38	Willow. Oak. Lime. Birch	450	92	5.4	14	SM to EM	6	6	6	6	0N	A to C	A linear belt of trees following path of brook. Located at base of steep bank. Limited inspection due to density.	No action	60+	B2
G39#	Oak x 2	300	41	3.6	8	SM	4	4	4	5	2W	A	Located adjacent to car park at base of steep bank. Acceptable condition.	No action	80+	B2
G40#	Oak x 2	290	38	3.48	8	SM	3	5	2	5	1S	A	Good form and vitality. No significant risk features observed.	No action	80+	C2
G41#	Ash. Hazel. Oak	200	18	2.4	4	Y to SM	3	3	3	3	0N	A	A linear group located at base of bank adjacent to car park.	No action	40+	C2
G42#	Ash x 6	220	22	2.64	8	SM	4	4	4	4	1S	A	Good form and vitality. Located at base of bank.	No action	40+	C2
T43#	Oak	360	59	4.32	9	SM	6	6	6	6	0S	A	Located at base of bank.	No action	80+	C1
G44#	Cypress	280	35	3.36	9	SM	3	3	3	3	0N	A to B	A linear boundary group for forming screen.	No action	40+	B2
T45#	Oak	820	304	9.84	13	EM	7	7	7	7	1	A	On adjacent property. Two stems from 1m.	No action	20+	B1
T46#	Oak	500	113	6	14	EM	7	7	7	7	1	A	On adjacent property.	No action	20+	B1
G47#	Oak x 2	700	222	8.4	16	EM	7	7	7	7	2	A	On adjacent property. Estimated measurements and location.	No action	20+	B1
T48	Oak	1000	452	12	17	M	10	10	10	10	0	A	Two stems from 1m.	No action	20+	B1
T49#	Oak	700	222	8.4	15	EM	8	5	5	2	0	A	One-sided, thin crown.	No action	20+	B1

BS5837:2012 TREE SCHEDULE



DATE OF SURVEY: 18/02/2022

JOB REFERENCE: MTM0171.AIA.01

SITE ADDRESS: The Ageas Bowl

Tree No.	Species	Stem Dia (mm)	RPA (m ²)	RPA Radius (m)	Height (m)	Age Class	Crown Spread (m)				Crown Clearance (m)	Condition	Comments	Recommendations	Remaining Contribution	BS5837 Retention Category
							N	E	S	W						
T50	Oak	1000	452	12	17	M	10	10	10	10	0	A	Multi-stemmed from 3-4m. Ivy into lower crown.	No action	40+	A1
T51#	Oak	900	366	10.8	16	M	6	4	10	9	5S	A	Third party tree. Not inspected.	No action	80+	A1
T52	Holly	480	104	5.76	7	EM	3	3	3	3	1S	A	Good form and vitality. Compaction of soil in root zone.	No action	20+	C1
T53	Monkey Puzzle	830	312	9.96	14	EM	6	6	6	6	3S	A	Compaction in root plate. Good vitality. Increased soil levels.	No action	40+	B2
G54	Ash. Holly. Oak	250	28	3	14	SM	3	3	3	3	2S	B to C	Linear group adjacent to storage area. Ash dieback present.	No action	10+	C2
G55	Lime	140	9	1.68	5	SM	1.5	1.5	1.5	1.5	2S	A	Newly established formal group adjacent to car park area.	No action	80+	C2
G56	Ash x 4	500	113	6	12	EM	5	5	5	5	3N	B to C	Reduced vitality. Inonotus present on stems.	No action	10+	C2
G57	Oak x 8	650	191	7.8	12	EM	6	6	6	6	2S	A to B	Located on site boundary.	No action	80+	B2
T58	Oak	750	255	9	10	EM	6	6	6	6	2	A	Multiple stems from ground level. Poor form.	No action	10+	C1
T59	Oak	500	113	6	10	EM	7	7	7	7	2	A	Good form and vitality.	No action	20+	B1
T60	Oak	1750	1386	21	10	OM	7	7	7	7	2.5	A	Split trunk, one-sided, veteran tree characteristics.	No action	40+	A3
T61	Oak	1000	452	12	12	EM	4	4	4	4	4	A	Thin crown, dead wood, die-back, basal damage and decay.	No action	Less than 10	U
T62	Oak	1100	547	13.2	14	M	8	8	8	8	4	A	90% dead	No action	Less than 10	U
W1	Beech, Oak, Sweet chestnut	500	113	6	17	Y to M	7	7	7	7	0N	A	On adjacent property more than 2.5m into Telegraph Wood from site boundary fence. Variable condition, some old damage, large branch loss, dead wood.	No action	40+	A1
W1a#	Oak	240	26	2.88	5	SM	4	6	3	0.1	0E	B	Fallen tree but has stabilised.	No action	20+	C1
W1b#	Dead	500	113	6	14	SM	6	6	6	6	3N	D	Dead standing tree.	No action	Less than 10	U

BS5837:2012 TREE SCHEDULE



DATE OF SURVEY: 18/02/2022

JOB REFERENCE: MTM0171.AIA.01

SITE ADDRESS: The Ageas Bowl

Tree No.	Species	Stem Dia (mm)	RPA (m ²)	RPA Radius (m)	Height (m)	Age Class	Crown Spread (m)				Crown Clearance (m)	Condition	Comments	Recommendations	Remaining Contribution	BS5837 Retention Category
							N	E	S	W						
W1c#	Oak	250	28	3	7	SM	3	3	3	3	0S	A	Good form and vitality.	No action	40+	C1
W1d#	Oak	1030	480	12.36	20	M	7	7	7	7	0N	A	Located within woodland.	No action	40+	A1
W1e#	Sweet chestnut	1050	499	12.6	20	M	7	7	7	7	0N	A	Located within woodland.	No action	40+	A1
W1f#	Oak	900	366	10.8	18	M	7	7	7	7	0N	A	Located within woodland.	No action	40+	A1
W1g#	Oak	900	366	10.8	18	M	9	9	9	9	10	A	Located within woodland.	No action	20+	A1
W1h#	Sweet chestnut	900	366	10.8	18	M	7	7	7	7	0N	A	Located within woodland.	No action	40+	A1
W1i#	Oak	1000	452	12	18	M	10	10	10	10	4	A	Located within woodland.	No action	40+	A1
W1j#	Beech	740	248	8.88	18	M	7	7	7	7	0N	A	Located within woodland.	No action	40+	A1
W1k#	Oak	850	327	10.2	18	M	7	7	7	7	0N	A	Located within woodland.	No action	40+	A1
W1l#	Oak	850	327	10.2	18	M	7	7	7	7	0N	A	Located within woodland.	No action	40+	A1
W1m	Oak	860	335	10.32	18	M	7	7	7	7	0N	A	Located within woodland.	No action	40+	A1
W1n#	Oak	1210	662	14.52	18	M	7	7	7	7	0N	A	Located within woodland.	No action	40+	A1
W1o#	Oak	870	342	10.44	18	M	7	7	7	7	0N	A	Located within woodland.	No action	40+	A1
W1p#	Oak	1100	547	13.2	18	M	7	7	7	7	0N	A	Located within woodland.	No action	40+	A1
W1q	Oak	1350	825	16.2	18	M	7	7	7	7	0N	A	Located within woodland.	No action	40+	A1
W1r	Oak	1030	480	12.36	18	M	7	7	7	7	0N	A	Located within woodland.	No action	40+	A1
W1s	Oak	820	304	9.84	18	M	7	7	7	7	0N	A	Located within woodland.	No action	40+	A1
W1t	Oak	1110	557	13.32	18	M	7	7	7	7	0N	A	Located within woodland.	No action	40+	A1

Appendix Two

Tree Survey Key

Trees for removal				
Category and definition		Criteria		
Category U Those in such a condition that any existing value would be lost within 10 years and which should, in the current context, be removed for reasons of sound arboricultural management		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 R category trees (i.e. where, for whatever reason, the loss of companion shelter cannot be mitigated by pruning) Trees that are dead or are showing signs of significant, immediate, and irreversible overall decline Trees infected with pathogens of significance to the health and/or safety of other trees nearby (e.g. Dutch elm disease), or very low quality trees suppressing adjacent trees of better quality Note – Habitat reinstatement may be appropriate (e.g. R category tree used as a bat roost: installation of bat box in nearby tree).		
Trees to be considered for retention				
Category and definition		Criteria - Subcategories		
		1 Arboriculture values	2 Landscape values	3 Conservation values
Category A Those of high quality and value: in such a condition as to be able to make a substantial contribution (a minimum 40 years is suggested)		Trees that are particularly good examples of their species, especially if rare or unusual, or essential components of groups, or of formal or semi-formal arboriculture features (e.g. the dominant and/or principal trees within an avenue)	Trees, groups or woodlands which provide a definite screening or softening effect to the locality in relation to views into or out of the site, or those of particular visual importance (e.g. avenues or other arboricultural features assessed as groups)	Trees, groups or woodlands of significant conservation, historical, commemorative or other value (e.g. veteran trees or wood pasture)
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 (e.g. presence of remediable defects including unsympathetic past management and minor storm damage)	Trees present in numbers, usually as groups or woodlands, such that they form distinct landscape features, thereby attracting a higher collective rating than they might as individuals but which are not, individually, essential components of formal or semi-formal arboriculture features (e.g. trees of moderate quality within avenue that includes better, A category specimens), or trees situated mainly internally to the site, therefore individually having little impact on the wider locality	Trees with clearly identifiable conservation or other cultural benefits
Category C Those 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
		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 150 mm should be considered for relocation		

Age Class

Y	Young	Trees that have not yet established
SM	Semi-Mature	Established trees up to 1/3 of expected height and crown
EM	Early mature	Between 1/3 and 2/3 expected height and crown
M	Mature	Between 2/3 and full expected height and crown
FM	Fully Mature	Full expected height and crown
OM	Over-Mature	Crown beginning to break up and decrease in size
S	Senescent	Crown in advanced stage of break-up

Condition

A	Good
B	Fair
C	Poor
D	Dead

Appendix Three

Plans



Date: 26/02/2022 Scale: 1:500@A1 Drawn by: ML

Note: Dimensions are not to be scaled from this drawing.
All written measurements are to be checked on site by
the contractor. Copyright Mulberry TMC.
Note: All rights described in Chapter IV of the Copyright
Design & Patents Act 1988 have generally been asserted



-  Category A Trees
-  Category B Trees
-  Category C Trees
-  Category U Trees
-  Root protection area
-  Estimated Position

Mulberry TMC
Adamson House
Towers Business Park
Wilmslow Road
Didsbury
M20 2YY
Tel: 0161 955 3628
Email: info@mulberrytmc.co.uk

Site Address:
The Ageas Bowl
Botley Rd, West End, Southampton
SO30 3XH

Drawing Title:
BS5837 Plan
Drawing No:
MTM0171.TCP.01. CH 3

Date: 26/02/2022 Scale: 1:500@A1 Drawn by: ML

Note: Dimensions are not to be scaled from this drawing.
All written measurements are to be checked on site by the contractor. Copyright Mulberry TMC.
Note: All rights described in Chapter IV of the Copyright Design & Patents Act 1988 have generally been asserted.



- Category A Trees
- Category B Trees
- Category C Trees
- Category U Trees
- Root protection area
- # Estimated Position

Mulberry TMC
Adamson House
Towers Business Park
Wilmslow Road
Didsbury
M20 2YY

Tel: 0161 955 3628
Email: info@mulberrytmc.co.uk

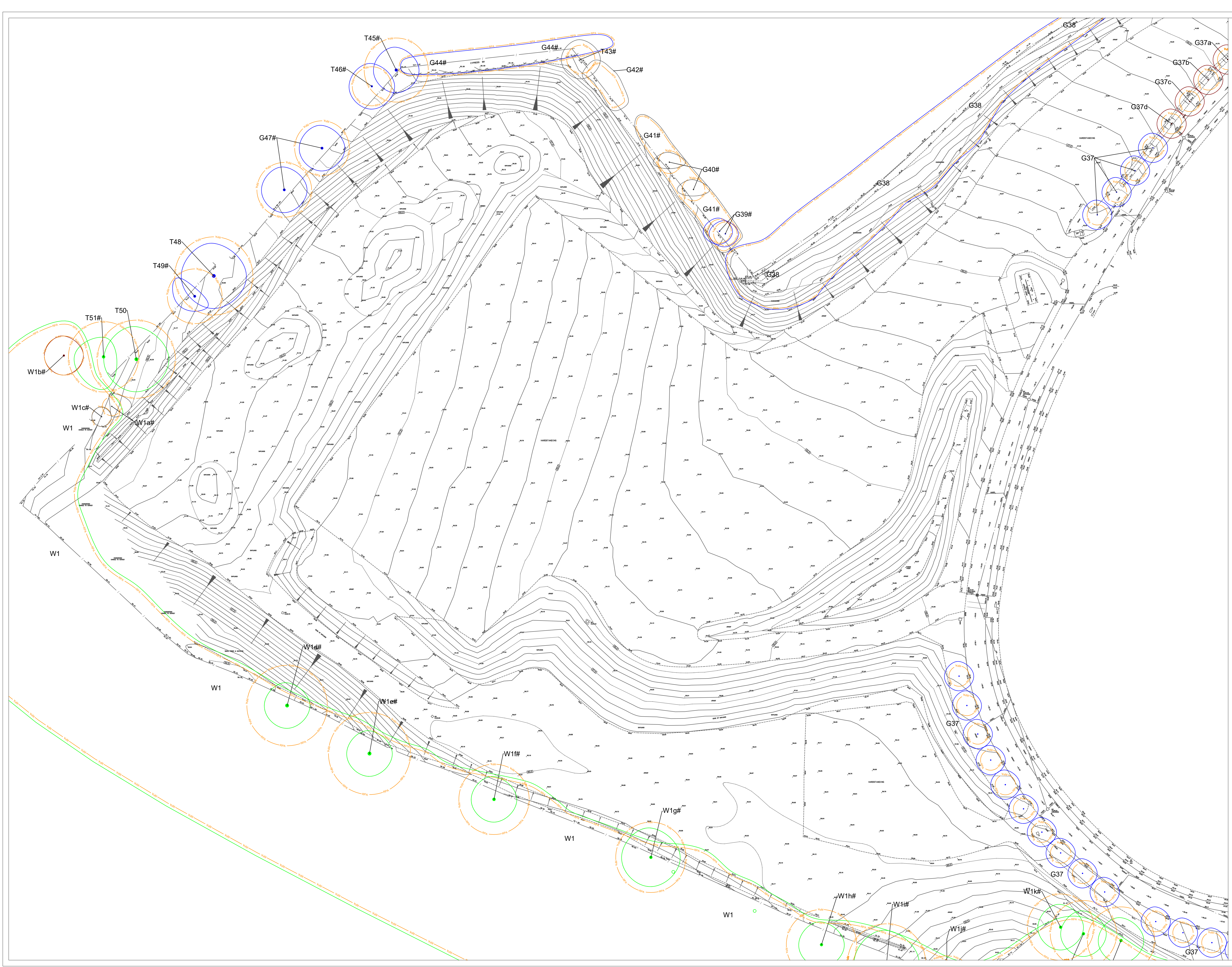
Site Address:
The Ageas Bowl
Botley Rd, West End, Southampton
SO30 3XH

Drawing Title:
BS5837 Plan

Drawing No:
MTM0171.TCP.01. CH 4

Date: 26/02/2022
Scale: 1:500@A1
Drawn by: ML

Note: Dimensions are not to be scaled from this drawing.
All written measurements are to be checked on site by the contractor. Copyright Mulberry TMC.
Note: All rights described in Chapter IV of the Copyright Design & Patents Act 1988 have generally been asserted.



-  Category A Trees
-  Category B Trees
-  Category C Trees
-  Category U Trees
-  Root protection area
-  Estimated Position

Mulberry TMC
Adamson House
Towers Business Park
Wilmslow Road
Didsbury
M20 2YY

Tel: 0161 955 3628
Email: info@mulberrytmc.co.uk



Site Address:
The Ageas Bowl
Botley Rd, West End, Southampton
SO30 3XH

Drawing Title:
BS5837 Plan

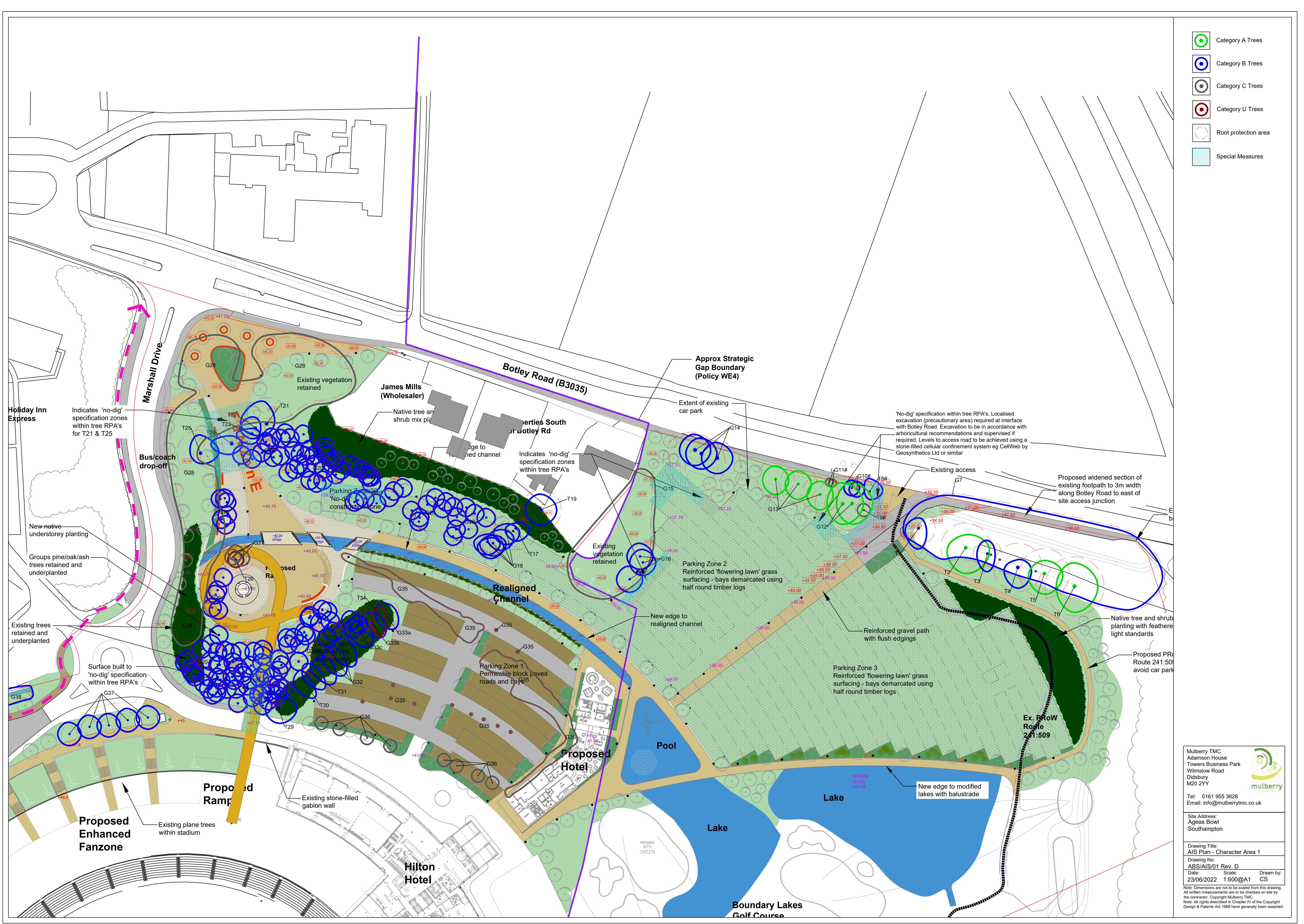
Drawing No:
MTM0171.TCP.01. CH 5

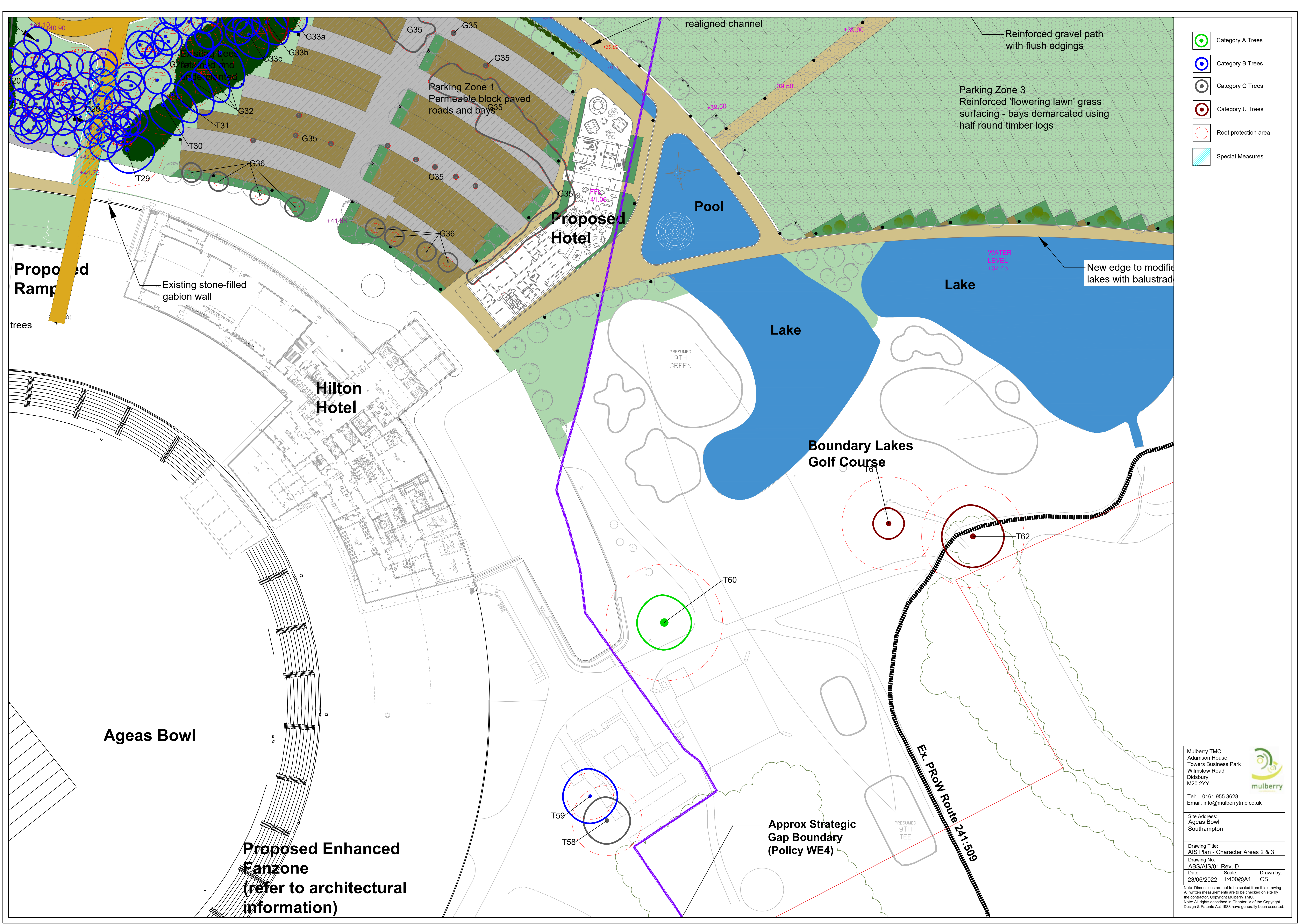
Date:
26/02/2022

Scale:
1:500@A1

Drawn by:
ML

Note: Dimensions are not to be scaled from this drawing.
All written measurements are to be checked on site by the contractor. Copyright Mulberry TMC.
Note: All rights described in Chapter IV of the Copyright Design & Patents Act 1988 have generally been asserted.







Mulberry TMC
Adamson House
Towers Business Park
Wilmslow Road
Didsbury
M20 2YU

Tel: 0161 955 3628
Email: info@mulberrytmc.co.uk

Site Address:
Ageas Bowl
Southampton

Drawing Title:
AIS Plan - Character Area 5

Drawing No:
ABS/AIS/01 Rev. D

Date: 23/06/2022 Scale: 1:600@A1

Drawn by: CS

Note: Dimensions are not to be scaled from this drawing. All written measurements are to be checked on site by the contractor. Copyright Mulberry TMC. Note: All rights described in Chapter IV of the Copyright Design & Patents Act 1988 have generally been asserted.

Appendix Four

Construction of Special Surface

METHODOLOGY FOR THE CONSTRUCTION OF HARD STANDING

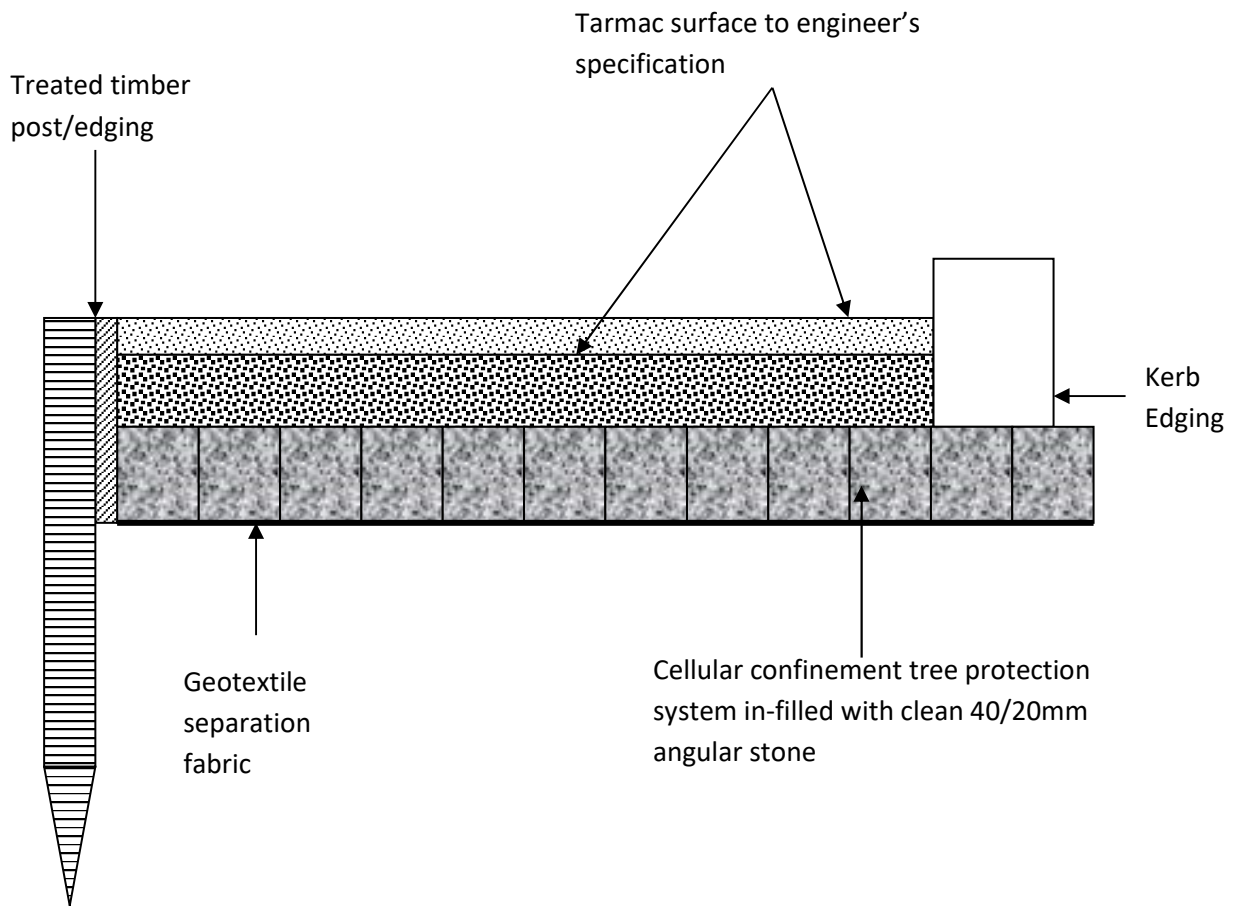
The following methodology supports the drawing indicating the construction of the proposed hard standing. The methodology is prepared on the basis of the sequence of operations necessary to complete the construction of the driveway with the minimum damage to the trees proposed for retention.

- Surface layer to be scraped off. This can be done either by hand or by very small machinery.
- Erect protective fencing to the edge of the construction area.
- Spread a sub grade material over the length of the driveway to fill any small ruts.
- Construct edging using treated timber if required.
- Lay geotextile mat over smoothed area.
- Extend the Geoweb perforated tree root protection system over the area of the driveway with sufficient overlap such that kerbs can be constructed on top of the Geoweb.
- Fill the voids within the Geoweb with reduced fines Type 1 material working into the site over the top of the Geoweb.
- Lay kerbs and surface over the Geoweb such that the construction binds itself together.
- Construct finished surface as required in line with guidance illustrations below.

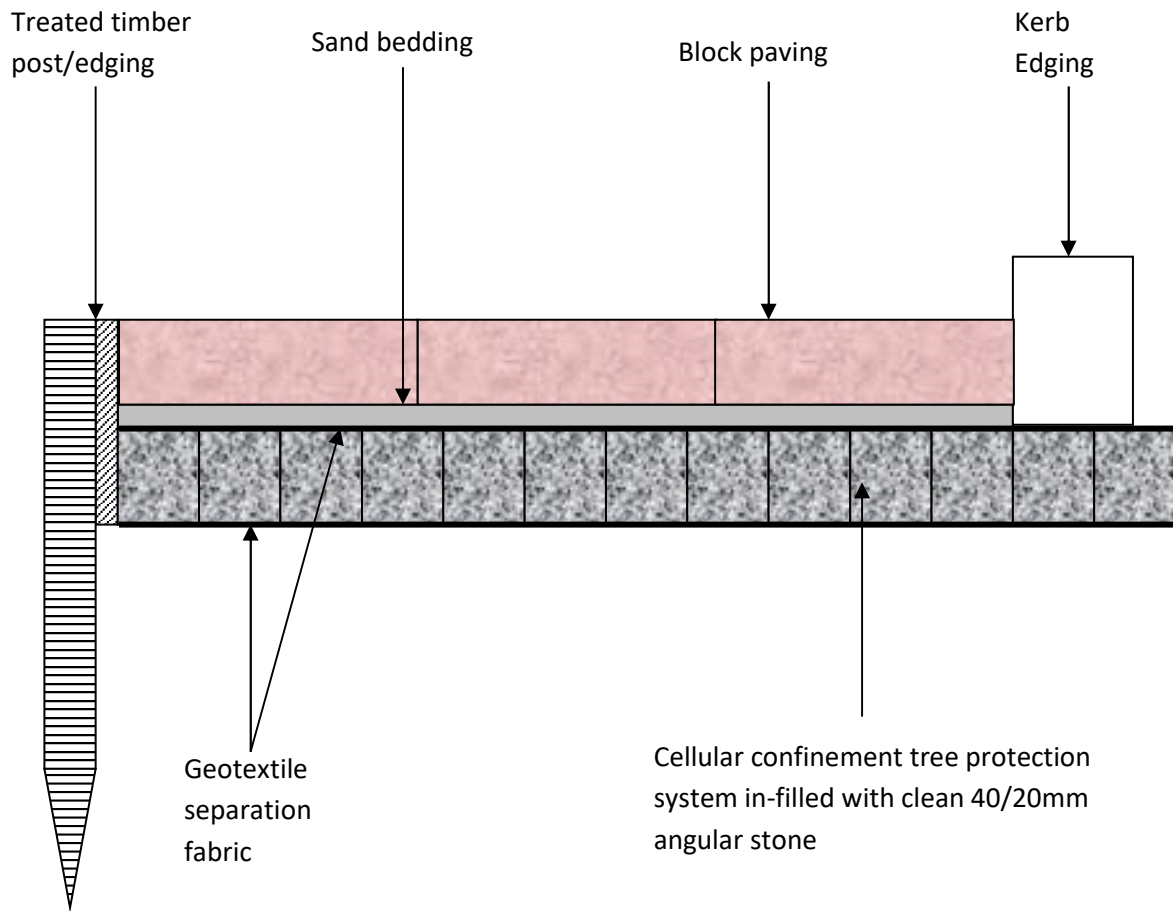
GEOWEB BASED CONSTRUCTION – (INDICATIVE ONLY)

Depth of confinement system variable according to use- refer to manufacturer

Tarmac Surface



Block Paved Surface



Gravel Surface

