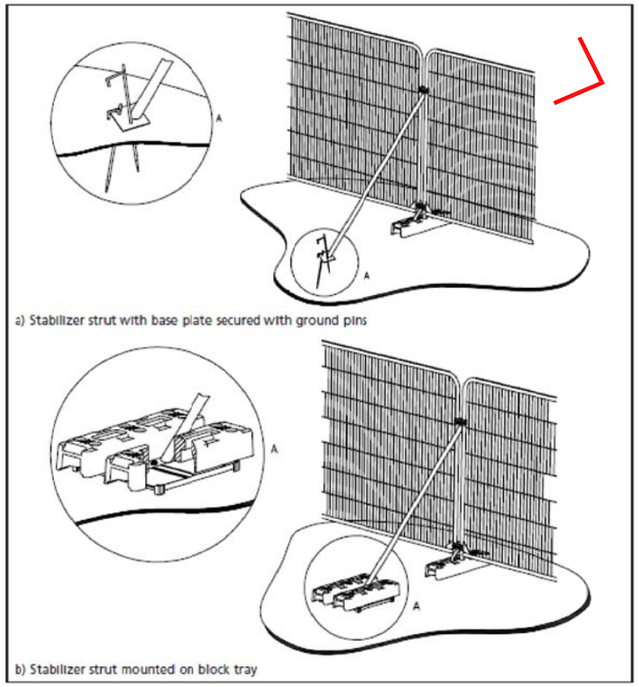
TREE PROTECTION FENCING DETAIL (per BS5837:2012 Figure 3)



ARBORICULTURAL METHOD STATEMENT (AMS)

1. An appointed project arboriculturist shall hold a pre-commencement site meeting with the contractors in order to explain what is required for tree protection, as set out on this drawing. During this meeting the positions for the tree protection fencing (TPF) and ground protection shall be set out

2. Install TPF in the positions shown on this plan by the solid red lines (see also notes). Given that TPF will be required as necessary on a very temporary basis only it can reasonably be to the reduced specification per BS5837:2012 Figure 3 (see insert box). TPF shall comprise panels clamped together with couplers, stabilizer struts as back bracing at each panel join and the bracing fixed to the ground with either pins or block trays. The TPF shall be retained until landscaping work is required to be undertaken within the area protected.

3. In the locations shown on this plan by blue hatching the new hard surfacing shall be constructed using a three-dimensional cellular confinement system over the existing ground surface. In these locations there shall strictly be no access over soft ground prior to the cellular confinement installation.

4. The TPF shall remain in place either until the completion of work, or until access is required to undertake landscaping work

5. Within the RPA of retained trees the following activities are strictly prohibited:

- Excavation
- Vehicular access unless protected by existing tarmac / ground protection
- Storage of materials unless protected by existing tarmac / ground protection
- Changes in levels unless previously specified
- The routing of underground services and drainage

This drawing must be viewed in colour

NOTE:

For details of trees shown on this plan refer to the Children's Zoo Tree Survey Report dated 11th May 2018

NOTE:

No work shall commence on site until an arboricultural pre-commencement meeting has taken place

Care should be taken when planning site operations to ensure that wide or tall loads, or plant with booms, jibs and counterweights can operate without coming into contact with retained trees. Such contact can result in serious damage to them and might make their safe retention impossible. Consequently, any transit or traverse of plant in close proximity to trees should be conducted under the supervision of a banksman to ensure that adequate clearance from trees is maintained at all times

ARBORICULTURAL SUPERVISION

A project arboriculturist shall be appointed to oversee the installation of tree protection measures.

Key times for site visits are:

- **Pre-commencement site meeting with contractors following installation of TPF and ground protection**
- **Immediately prior to the start of hard surface construction using the cellular confinement**

The project arboriculturist shall advise on tree protection matters as required during the project.

Following each site visit a report shall be prepared documenting what was seen and discussed.

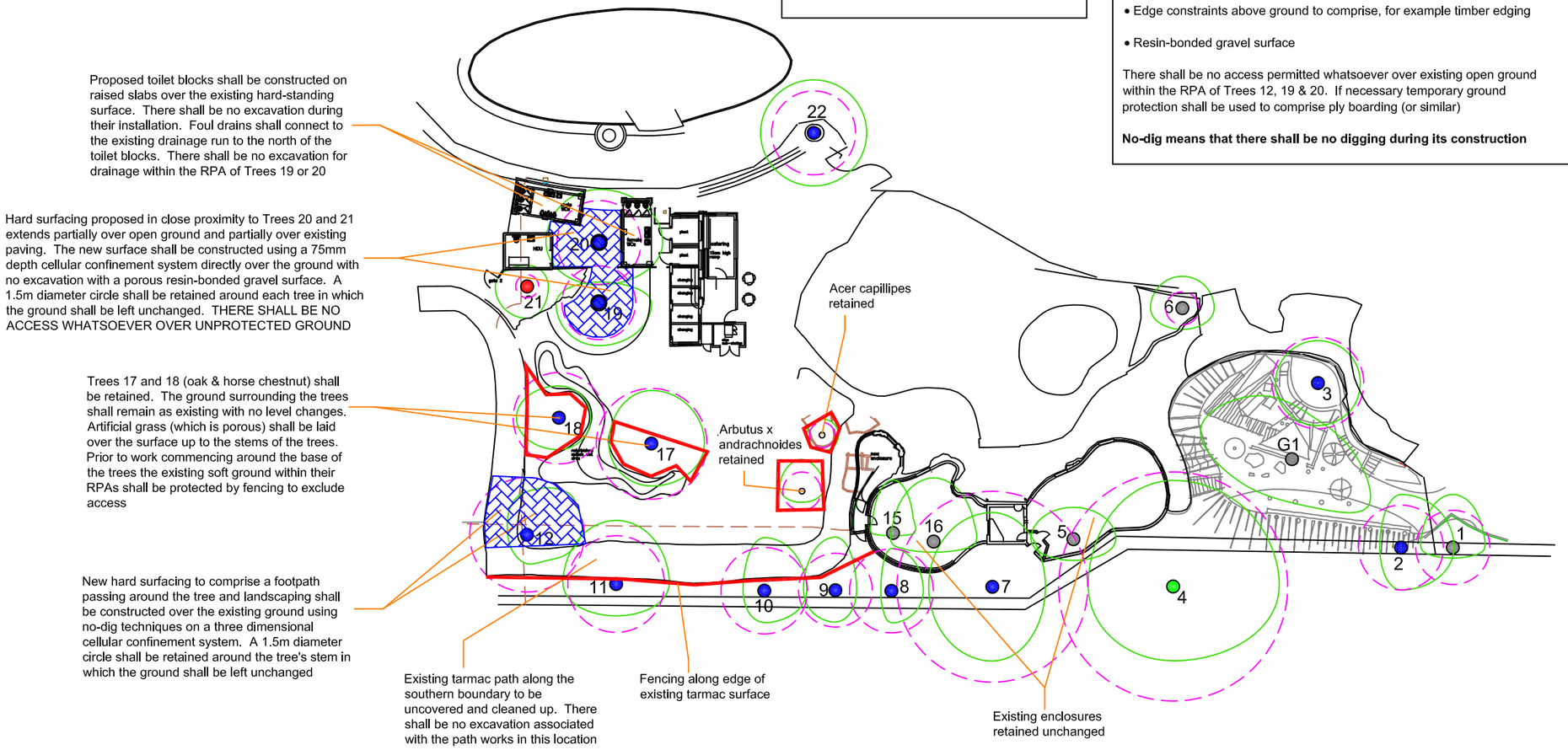
NO-DIG HARD SURFACING REQUIREMENTS

Where hard surfacing is proposed over the RPA of retained trees it shall be constructed above ground level using a no-dig three-dimensional cellular confinement system. The locations of where this is required are shown on this plan by blue hatching. Construction shall comprise:

- A geotextile membrane (eg *Terram)* laid on the ground
- 3 dimensional cellular confinement such as Geosythetics *cellweb* filled with clean, angular 20-40mm stone containing no fines
- Edge constraints above ground to comprise, for example timber edging
- Resin-bonded gravel surface

There shall be no access permitted whatsoever over existing open ground within the RPA of Trees 12, 19 & 20. If necessary temporary ground protection shall be used to comprise ply boarding (or similar)

No-dig means that there shall be no digging during its construction



TREE PROTECTION PLAN

PROJECT
Project Blossom, ZSL London Zoo

CLIENT
ZSL

JOB REF
DS01051801

DRAWING NO
DS01051801.06

DATE
04/02/2019

Patrick Stileman Ltd
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N

KEY

Tree / tree group for retention

Root Protection Area (RPA) for retained tree / tree group

Position of Tree Protection Fencing (TPF) (refer also to notes on plan)

Area for no-dig surfacing using three-dimensional cellular confinement

BS 5837 category key

- Category U tree
- Category A tree
- Category B tree
- Category C tree

SCALE
1:500 @ A3

0 10m 20m

NOTE:

Stem diameters are not drawn to scale. See schedule for dimensions.

This drawing is based on the plan supplied to us by the project architect. The following trees were excluded from the survey and their locations shown are indicative only: 6, 10, 11, 21, G1, G2

PATRICK STILEMAN LTD
ARBORICULTURAL CONSULTANCY

Institute of Chartered Foresters
Registered Consultant

Principal Consultant: Patrick Stileman BSc(Hons), MICFor, MRICS, Dip. Arb (RFS), CUEW, RC.Arbor. A

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TREE SURVEY REPORT

Project
London Zoo Children's Zoo

Client
ZSL

Prepared by
Patrick Stileman BSc(Hons), MICFor, MRICS, Dip Arb (RFS), RC.Arbor.A

Date
11th May 2018

Project reference:
DS01051801

1 INTRODUCTION

1.1 I am Patrick Stileman, Director of Patrick Stileman Ltd. I am acting on instruction of the client, Zoological Society of London (ZSL). I have qualifications and experience in arboricultural consultancy and I have given details of this in Appendix 1.

1.2 Brief:

1.2.1 Patrick Stileman Ltd is instructed by the client to undertake a survey of trees which could potentially be affected by proposed demolition and subsequent re-build of the former exhibit known as the Children's Zoo which has recently been damaged by fire. The tree survey is to be in accordance with British Standard 5837:2012 '*Trees in relation to design, demolition and construction – Recommendations*' (hereafter referred to as BS5837). We are to survey all trees with stem diameters in excess of 75 mm at a height of 1.5 metres, including those off site which could pose a potential constraint to development.

1.2.2 Based on the data collected in the tree survey, we are to show constraints to development posed by trees at a preliminary level by means of a Tree Constraints Plan.

1.2.3 The purpose of the information provided at this stage is to give advice on the principal tree constraints in relation to development in order to assist the design process towards the preparation of an arboriculturally defensible scheme.

1.3 Caveats:

1.3.1 I surveyed trees at a preliminary level only. The survey must not be substituted for a tree risk assessment report. Detailed inspection including decay mapping, aerial inspections, root or soil analysis etc. was not undertaken. In cases where I consider that further investigation is required I note this in the preliminary management recommendations column of the tree survey data.

1.3.2 This Tree Survey Report comprises Stage 1 of a five stage arboricultural process relating to planning. Stage 2 is the arboricultural input required during layout design taking account of arboricultural features and constraints; Stage 3 is the preparation of supporting documentation (Arboricultural Impact Assessment) when the layout is to our satisfaction; Stage 4 is the preparation of an Arboricultural Method Statement specifying how trees will be physically protected during the development process; and Stage 5 is the implementation, supervision and on-going monitoring of the works during development.

1.4 **Survey date:** Trees were surveyed by me, Patrick Stileman, on 8th May 2018.

2 TREE SURVEY

2.1 **Tree identification:** Individual trees have been allocated a number and groups of trees have been allocated a number prefixed by the letter G. Their locations are shown on the Tree Survey Plan dated 11th May 2018, drawing no: DS01051801.01, included on Page 12 of this report. Data pertaining to each tree or group of trees is included in the Tree Survey Data on pages 8-11 of this report.

2.2 **Tree data:** In carrying out the survey I assessed the following for each tree and group of trees:

- Dimensions (height, crown spread, stem diameter, and height of crown base).
- Root protection area, based on stem diameter (See 4.6).
- Life stage and physiological condition.
- Structural defects of significance, and general condition. Assessment of the value that the tree provides from a wider landscaping perspective.
- An assessment of the likely remaining useful contribution in years.

Based on the above information, I have allocated a category (A, B, C, U) indicating the quality and value for each tree or tree group (in accordance with BS5837), to be taken into account when planning any future development.

3 STATUTORY PROTECTION

3.1 It is my understanding that trees at London Zoo are not protected by a tree preservation order (TPO). However, the site is located within a conservation area (administered by Westminster Council) and consequently all trees (bar certain exemptions) with stem diameters in excess of 75mm at 1.5m above ground level have provisional statutory protection.

4 TREE CONSTRAINTS PLAN

4.1 Based on the information obtained by the tree survey I have prepared a Tree Constraints Plan (TCP), dated 11th May 2018, drawing no: DS0105801.02, included on Page 13 of this report.

4.2 On the TCP I have used different colours indicating tree crowns to distinguish between trees which could defensibly be removed in order to facilitate development (broken blue); and trees with a higher retention priority which should, initially, be considered for retention (solid green). The TCP has been prepared as a working drawing and the suggested tree retention / removal balance is not definitive.

4.3 Category C trees are classified as trees of low quality; they should not impose significant constraints to design layout, and if necessary can defensibly be shown for removal in order to facilitate good design. If Category C trees can be satisfactorily retained within the proposed layout then consideration should be given for this.

4.4 Category B trees are classified as trees of moderate quality, which covers a large range. Some Category B trees are of insufficient value to impose significant design constraints, such that their removal can be justified in order to promote good design.

4.5 Category A trees are classified as trees of high quality and there should be an initial presumption for retention of these trees.

4.6 The TCP shows the position of the Root Protection Area (RPA) for trees with a higher retention priority as broken pink lines. BS5837 (Section 3.7) defines the RPA as a '*layout design tool indicating the minimum area around a tree deemed to contain sufficient roots and rooting volume to maintain the tree's viability, and where the protection of the roots and soil structure is treated as a priority*'. In other words, the RPA represents the **minimum** area around each tree in which the ground should remain largely undisturbed. The RPA is an area based on a circle with a radial distance of 12x the stem diameter at 1.5 metres in the case of single-stemmed trees, or 12x the combined stem diameter (calculated in accordance with a formula set out in BS5837) for trees with more than one stem. In situations where the site conditions clearly prevent consistent rooting around the tree (for example the presence of roads or buildings within the notional RPA circle) I modify the shape of the RPA to take this into account. At this site I have not adjusted the RPA shape for any tree (however see note on TCP for Tree 23) and these are all shown based on circles.

4.7 At the design stage (Stage 2 – see Section 1.3.3), detailed advice should be given by the arboriculturalist, specifically in relation to the above ground constraints, namely:

1. Future growth predictions for the key retention trees where this is likely to be significantly different to their existing dimensions.

2. The effects of dominance and shading posed by trees in a) their current context, and b) taking account their future likely growth.

This level of detailed advice is beyond the scope of this report which is preliminary in nature.

5 SOIL

5.1 I am not aware if a detailed soil analysis has been undertaken at this site. I did not take soil samples while on site however I have looked at the British Geological Survey plan to establish the likely nature of the soil present. This indicates that the bedrock comprises the London Clay Formation with no superficial deposits recorded.

5.2 The soils associated with the geology described above are likely to be neutral loams with good fertility and poor drainage.

5.3 There may be local anomalies not shown in the British Geological Survey maps and a more detailed site specific soil assessment should be undertaken if required.

6 KEY TO TREE SURVEY DATA

6.1 **Tree / Group reference:** Tree numbers as shown on the Tree Survey Plan. Where trees form a coherent group, they have been assessed as a group, and are shown in the survey and on the plan prefixed with the letter G.

6.2 **Species:** These are listed in the schedule by their common name. The botanical names of the principal species present are as follows:

Field maple: *Acer campestre*
Horse chestnut: *Aesculus hippocastanum*
London plane: *Platanus x hispanica*
White mulberry: *Morus alba*
Ash: *Fraxinus excelsior*
Aspen: *Populus tremula*
Elder: *Sambucus nigra*
Pedunculate oak: *Quercus robur*
Honey locust: *Gleditsia triacanthos*
Tree of Heaven: *Ailanthus altissima*
Olive: *Olea europaea*
White mulberry: *Morus alba*
Cabbage palm: *Cordyline australis*
Arbutus sp
Holly: *Ilex aquifolium*
Hawthorn: *Crataegus monogyna*
Hazel: *Corylus avellana*

6.3 **Ht. (m):** The height of the tree is measured or estimated to the nearest half metre for dimensions up to 10 m, and to the nearest whole metre for dimensions over 10 m.

6.4 **Crown spread – NSWE:** Radial crown spread measured or estimated, rounded up to the nearest metre, for north, south, west and east.

6.5 **Crown base:** The height above ground level and orientation of the lowest permanent crown base (excluding basal, and small epicormic growth).

6.6 **Stem count:** For trees recorded as individuals, the number of stems recorded for the purpose of RPA calculation (where stem numbers exceed 5 an average diameter is assessed).

6.7 **Stem dia:** In the first column the stem diameter is recorded for trees with a single stem, or the first measured stem where there are fewer than five, or the average stem diameter for trees with more than 5 stems. The diameter of individual stems for trees with up to five stems is recorded in columns 2-5. Measurements are shown in mm, rounded to the nearest 10. In some situations it is not possible to measure the diameter of stems, and for these estimates are made. When stem diameters have been estimated they are written in *italics*. Measurements are taken in accordance with BS5837 Annex C. For tree groups, stem measurements are recorded for the largest tree in the group.

6.8 **RPA Rad:** This shows the radius of the notional RPA circle in metres to be centered on the tree, based on the calculation made using the stem diameter.

6.9 **RPA Area:** This shows the calculated RPA in m^2 for each tree (as individuals or within groups). If the notional RPA circle is adjusted (see 4.6) the area must be maintained. The RPA area is capped at 707 m^2, equivalent to a circle with a radius of 15m.

6.10 **Life Stage:** An assessment of the tree's stage of life, where: Y = young, SM = semi-mature, EM = early-mature, M = mature, and OM = over-mature.

6.11 **Phys. Condition:** The physiological condition of the tree, reflecting the condition of the vascular system as indicated by leaf and shoot vitality. The physiological condition is not a comment on the tree's structural condition. The physiological condition codes used are G = good; F = fair; P = poor; D = dead.

6.12 **Condition and observations:** Description of general tree condition, including structural integrity, the presence of hazards, pests and diseases which may affect the tree's retention span.

6.13 **Preliminary management recommendations:** Work required to trees for reasons of sound arboricultural management only, **not for development facilitation**. This is not to be taken as a list of tree work required prior to development activity, but provides management recommendations for trees in their current context. This may include the further investigation of suspected defects. Where trees are located in neighbouring property, this is usually not applicable.

6.14 **Ret span:** Estimated remaining likely retention span based on species, condition & context. The following longevity bands are used: <10; 10-20; 20-40; >40. The retention span assessment is based on trees in their current context.

6.15 **Category:** BS5837:2012 Category where:

6.15.1 **U = Trees unsuitable for retention**. Trees in such a condition that they cannot realistically be retained as living trees in the context of the current land use for longer than 10 years. These trees are shown on the tree plans with dark red centres.

6.15.2 **A = Trees of high quality**. Trees of high quality with an estimated remaining life expectancy of at least 40 years. These trees are shown on the tree plans with green centres.

6.15.3 **B = Trees of moderate quality**. Trees of moderate quality with an estimated remaining life expectancy of at least 20 years. These trees are shown on the tree plans with blue centres.

6.15.4 **C = Trees of low quality.** Trees of low quality with an estimated remaining life expectancy of at least 10 years, or young trees with a stem diameter below 150mm. These trees are shown on the tree plans with grey centres.

6.15.5 Trees of notable quality are graded as Category A or Category B. These trees are divided further into sub-categories. Sub-category 1 is allocated where it has been assessed that the tree has mainly arboricultural qualities. Sub-category 2 is allocated where it is assessed that the tree has mainly landscape qualities. Sub-category 3 is allocated where it is assessed that the tree has mainly cultural qualities, including conservation.

6.15.6 Trees may be allocated more than one sub-category. All sub-categories carry equal weight, with for example an A3 tree being of the same importance and priority as an A1 tree.

6.15.7 I do not allocate sub-categories to Category C trees.

Patrick Stileman

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Chartered Arboriculturist. Arboricultural Association Registered Consultant

Director Patrick Stileman Ltd

TREE SURVEY DATA : LONDON ZOO, CHILDRENS ZOO

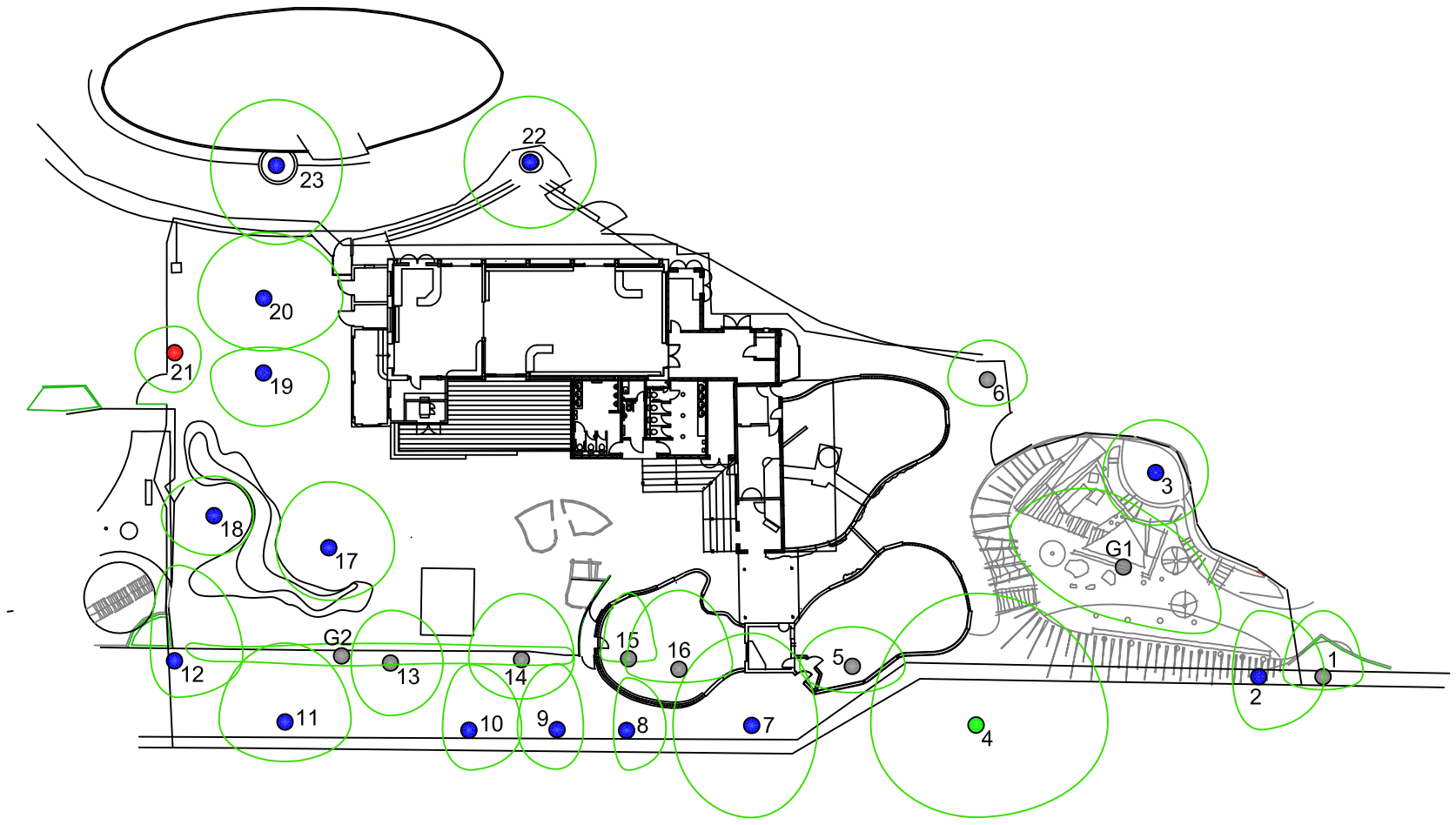
Tree / Group reference	Species	Ht. (m)	Crown Spread (m)				Crown base (m)	Stem Count	Stem Dia. (mm)					RPA Rad. (m)	RPA Area (m2)	Life Stage Y-SM-EM-M-OM	Phys. Condition G-F-P-D	Condition and observations	Work proposed	Ret. Span <10, 10+ 20+, >40	Grade U-A-B-C
			N	S	W	E			1 / mean	2	3	4	5								
1	Field maple	11	5	1	3	3	2m W	2	*250*	*150*				3.50	38	EM	F	Located outside hoarding. Suppressed tree with moderate lean. No access to view base.	No action required at time of survey	20+	C
2	Horse chestnut	10	5	4	2	5	2m N	2	280	180				4.00	50	SM	F	Twin-stemmed from 0.6 metres with smaller secondary stem to south-east. Reasonable form.	No action required at time of survey	>40	B1
3	Horse chestnut	11	4	4	4	4	2m S	1	360					4.32	59	EM	F	Compact crown with dense foliage. Wound on lower stem appears to have been caused by past infection by bacterial bleeding canker, now predominantly absent. Tree of moderate quality and value.	No action required at time of survey	>40	B1
4	London plane	20	10	7	8	10	4m E	1	*900*					10.80	366	M	G	Located off-site in park adjacent. High quality tree with wide, spreading crown. No defects seen of apparent structural significance.	No action required at time of survey	>40	A1
5	Horse chestnut	10	3	2	4	4	3m E	3	180	210	140			3.72	43	SM	F	Suppressed by trees 4 and 7 with relatively poor future prospects. Three stems - base could not be inspected due to steel guard associated with former exhibit.	No action required at time of survey	20+	C
6	White mulberry	7	3	2	3	3	2m S	1	130					1.56	8	Y	G	Good form and potential.	No action required at time of survey	>40	C
7	Ash	18	7	7	6	5	5m N	1	750					9.00	254	M	G	Sunken lesion on stem at 1.5 metres on north-east side might limit retention span, otherwise no defects seen of apparent structural significance. High quality tree.	No action required at time of survey	20+	B1

Tree / Group reference	Species	Ht. (m)	Crown Spread (m)				Crown base (m)	Stem Count	Stem Dia. (mm)					RPA Rad. (m)	RPA Area (m2)	Life Stage Y-SM-EM-M-OM	Phys. Condition G-F-P-D	Condition and observations	Work proposed	Ret. Span <10, 10+ 20+, >40	Grade U-A-B-C
			N	S	W	E			1 / mean	2	3	4	5								
8	Ash	15	4	3	1	3	5m N	1	330					3.96	49	EM	F	Slender, upright profile. Tree of moderate quality and value. No defects seen of apparent structural significance. Slightly low vitality.	No action required at time of survey	>40	B1
9	Ash	14	5	3	3	2	3m N	1	290					3.48	38	EM	F	Slender, upright profile. Tree of moderate quality and value. No defects seen of apparent structural significance. Slightly low vitality.	No action required at time of survey	>40	B1
10	Ash	15	5	3	2	4	4m N	1	340					4.08	52	EM	F	Slender, upright profile. Tree of moderate quality and value. No defects seen of apparent structural significance. Slightly low vitality.	No action required at time of survey	>40	B1
11	Ash	17	6	3	5	5	5m E	1	380					4.56	65	EM	F	Slender, upright profile. Tree of moderate quality and value. No defects seen of apparent structural significance. Slightly low vitality.	No action required at time of survey	>40	B1
12	Aspen	16	3	7	5	2	3m N	1	450					5.40	92	M	G	Pronounced crown distortion to the north. Reasonably prominent tree. No defects seen of apparent structural significance.	No action required at time of survey	20+	B1
13	Horse chestnut	8	4	4	3	4	2m E	1	*350*					4.20	55	EM	F	Suppressed tree with distorted growth from competition with Tree 10. Limited future prospects, but currently provides some amenity value.	No action required at time of survey	10+	C
14	Horse chestnut	8	5	3	4	4	3m N	1	*300*					3.60	41	EM	P	Suppressed tree with distorted growth from competition with Tree 9. Low vitality throughout. Limited future prospects.	No action required at time of survey	10+	C

Tree / Group reference	Species	Ht. (m)	Crown Spread (m)				Crown base (m)	Stem Count	Stem Dia. (mm)					RPA Rad. (m)	RPA Area (m2)	Life Stage Y-SM-EM-M-OM	Phys. Condition G-F-P-D	Condition and observations	Work proposed	Ret. Span <10, 10+ 20+, >40	Grade U-A-B-C
			N	S	W	E			1 / mean	2	3	4	5								
15	Elder	9	5	0	2	2	2m N	1	*300*					3.60	41	M	G	Suppressed tree with crown asymmetry north from competition. Good vitality. Single stem to 1.3 metres. Steel sheet around base.	No action required at time of survey	10+	C
16	Pedunculate oak	11	6	1	4	4	1m E	1	*300*					2.04	13	SM	F	Distorted growth from group competiton. Tree of relatively poor quality and value with limited future prospects.	No action required at time of survey	20+	C
17	Pedunculate oak	11	5	4	4	5	3m N	3	280	280	180			5.22	86	SM	F	Three stems from ground level. Tight unions developing. Previously crown-reduced. Tree of moderate quality and value just crossing B grade threshold.	No action required at time of survey	20+	B1
18	Horse chestnut	9	3	3	4	3	1m W	2	330	140				4.31	58	EM	F	Lower bark extensively stained and lesions present from past infection by bacterial bleeding canker. Disease now appears to be largely absent and tree has reasonable prospects of recovery. Small tree of relatively low significance with dense foliage following past crown reduction. Tree just crosses B grade threshold.	No action required at time of survey	20+	B1
19	Pedunculate oak	13	4	5	4	2	2m S	1	290					3.48	38	EM	G	Slight crown asymmetry from competition with Tree 20. Reasonable form and high future potential.	No action required at time of survey	>40	B1
20	Pedunculate oak	14	5	4	5	6	2m E	1	330					3.96	49	EM	G	Slight crown asymmetry from competition with Tree 19. Reasonable form and high future potential.	No action required at time of survey	>40	B1
21	Honey Locust	4	2	3	3	2	2m S	1	90					1.08	4	Y	P	Poor form with distorted crown. Bacterial bleeding canker on lower stem. Short likely retention span.	No action required at time of survey	<10	U

Tree / Group reference	Species	Ht. (m)	Crown Spread (m)				Crown base (m)	Stem Count	Stem Dia. (mm)					RPA Rad. (m)	RPA Area (m2)	Life Stage Y-SM-EM-M-OM	Phys. Condition G-F-P-D	Condition and observations	Work proposed	Ret. Span <10, 10+ 20+, >40	Grade U-A-B-C
			N	S	W	E			1 / mean	2	3	4	5								
22	Ash	12	5	5	5	5	3m S	1	330					3.96	49	EM	F	Slightly low vitality with twig die-back throughout. Reasonable form. No defects seen of apparent structural significance.	No action required at time of survey	20+	B1
23	Tree of heaven	16	5	6	5	5	2m E	1	940					11.28	400	OM	F	Large-for-species. Heavily reduced tree. Large stem burr at 2 metres on south side. Historic cavity at 4 metres on west side. Potentially restricted retention span.	No action required at time of survey	20+	B1
G1	Olive, white mulberry, cabbage palm, Arbutus sp	3 to 5	2	2	2	2	1m S	1	*100*					1.20	5	Y	F	Approximately 20 young, slender trees planted as part of the landscaping for the former exhibit.	No action required at time of survey	>40	C
G2	Holly, hawthorn, ash, hazel, elder, aspen	3 to 5	2	2	2	2	0m N	1	*150*					1.80	10	EM	G	Scrappy hedgerow group with dense bramble predominanting.	No action required at time of survey	20+	C

This drawing must be viewed in colour



TREE SURVEY PLAN

PROJECT
London Zoo Children's Zoo

CLIENT
ZSL

JOB REF
DS01051801

DRAWING NO
DS01051801.01

DATE
11/05/2018

Patrick Stileman Ltd
9 Chestnut Drive, Berkhamsted, Herts,
HP4 2JL 01442 866112

N

KEY

Tree canopy spread

BS 5837 category key

- Category U tree
- Category A tree
- Category B tree
- Category C tree

SCALE
1:500 @ A3

0 10m 20m

NOTE:

Stem diameters are not drawn to scale. See schedule for dimensions.

This drawing is based on the plan supplied to us by the project architect. The following trees were excluded from the survey and their locations shown are indicative only: 6, 10, 11, 21, G1, G2

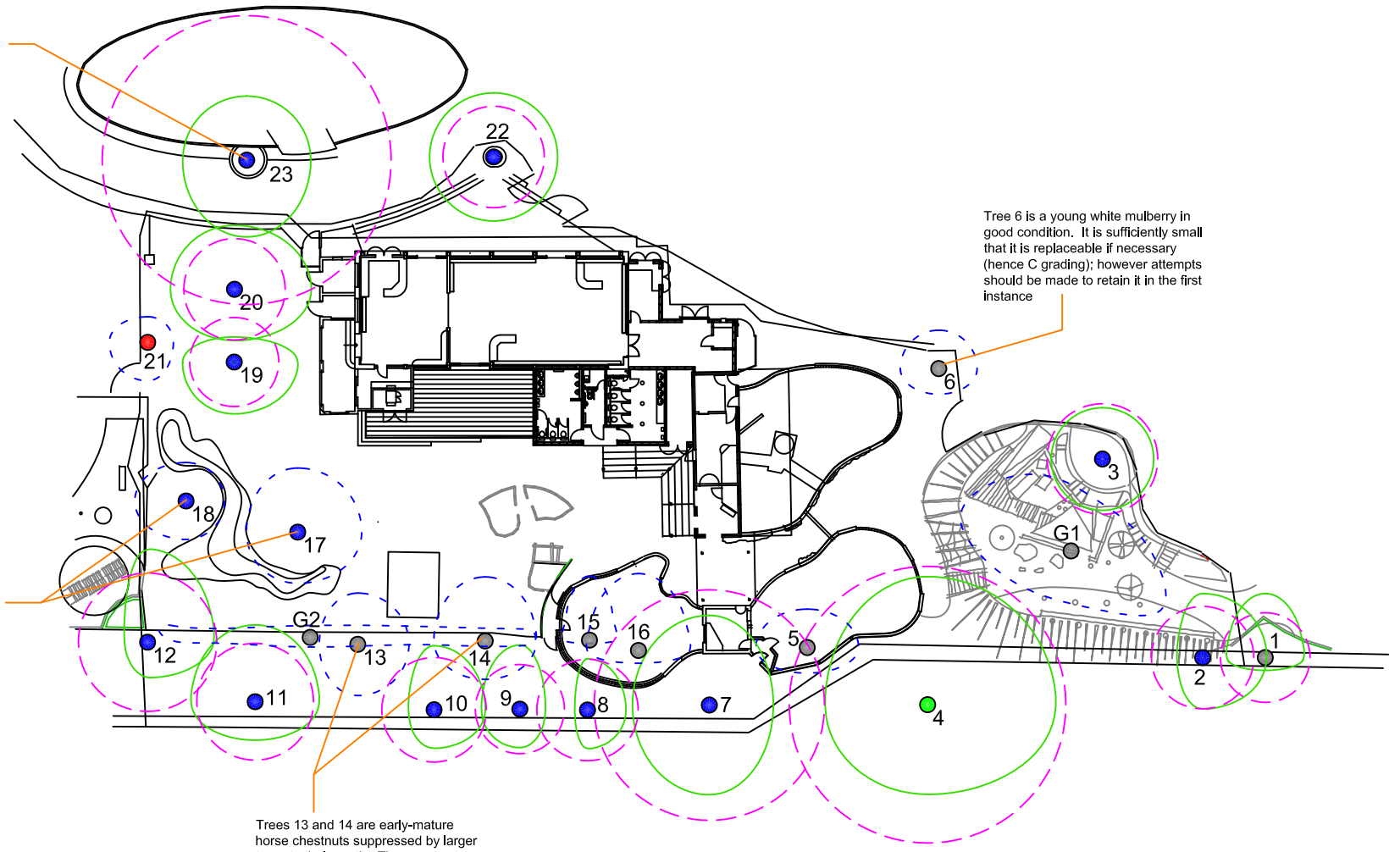
This drawing must be viewed in colour

Tree 23 has been heavlly reduced and has a small crown volume relative to its stem diameter. This would justify a reduction in RPA; however it's position relative to the penguln pool would result in a need to extend the RPA south. On balance the two factors are considered to counteract each other and the RPA has been maintained as a clrcle

Tree 6 is a young white mulberry in good condition. It is sufficiently small that it is replaceable if necessary (hence C grading); however attempts should be made to retain it in the first instance

Trees 17 and 18 are moderate quallty individuals assessed to just cross the B-grade threshold (refer to data). It is considered that if necessary a case can be made to remove these trees in order to facilitate the design of a high quality exhibit enabling retention of the better quality trees 19 and 20.

Trees 13 and 14 are early-mature horse chestnuts suppressed by larger trees to their south. They are trees which have limited likely future prospects and a case could be made to remove them if required to facilitate the construction of a new exhibit.



TREE CONSTRAINTS PLAN

PROJECT
London Zoo Children's Zoo

CLIENT
ZSL

JOB REF
DS01051801

DRAWING NO
DS01051801.02

DATE
11/05/2018

N

Patrick Stileman Ltd
9 Chestnut Drive, Berkhamsted, Herts,
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KEY

Tree / tree group initially recommended for retention

Tree / tree group which could initially be considered for removal

Root Protection Area (RPA) for tree / tree group with high retention priority

BS 5837 category key

- Category U tree
- Category A tree
- Category B tree
- Category C tree

SCALE
1:500 @ A3

0 10m 20m

NOTE:

Stem diameters are not drawn to scale. See schedule for dimensions.

This drawing is based on the plan supplied to us by the project architect. The following trees were excluded from the survey and their locations shown are indicative only: 6, 10, 11, 21, G1, G2

APPENDIX 1

Qualifications and experience of Patrick Stileman BSc(Hons), MICFor, Dip.Arb(RFS), M.Arbor.A

I am Patrick Stileman, director of Patrick Stileman Ltd Arboriculltural Consultancy.

My qualifications in arboriculture are as follows:

National Certificate in Arboriculture *Nch(arb)*

The Arboricultural Associations Technicians Certificate *Tech.Cert (Arbor.A)*

The Royal Forestry Society's Professional Diploma in Arboriculture *Dip.Arb(RFS)*

In addition to the qualifications listed above which are specific to the field of arboriculture, I also hold an honours degree in Environmental Science *BSc(Hons)*.

I hold chartered status, being a Chartered Arboriculturist and professional member of the Institute of Chartered Foresters *MICFor*. I am a member of the Royal Institute of Chartered Surveyors (RICS).

I am a registered consultant with the Arboricultural Association.

I am a trained expert witness, and hold the Cardiff University Bond Solon Expert Witness Certificate.

I am a member of the Royal Forestry Society.

I have been working within the arboricultural industry since 1994 and have been working as a consultant since 2001. I am frequently instructed by professionals to provide advice and assistance relating to trees within the planning process; I have a wide client base in this field including developers, architects, planning consultants, and Local Planning Authorities. I am experienced with providing arboricultural input in planning appeals as written representation, informal hearing and public local inquiry.

I am regularly instructed to assist with tree risk assessments, and to provide guidance relating to tree safety. Past clients for this work include Local Authorities, schools, residents associations, large organisations including zoos and estates, and private individuals.

I provide advice in relation to alleged tree-related damage to buildings. Clients for this work are typically domestic homeowners, but have also included local authorities. Other work that I undertake involves the provision of tree planting schemes; and advice relating to the general management of trees.

I have worked as an arboricultural expert witness for public and private sector clients.

Prior to running my current consulting practice, I was a partner in an arboricultural contracting business in which I was involved with the practical aspect of organising, and execution of contract tree work.