Frieze Sculpture 2019, Regent's Park

Tree Survey Report

Revision B

May 2019

Client	Frieze Arts Fairs
Job name	Frieze Sculpture 2019, Regent's Park
Report title	Tree Survey Report
File reference	19-812-Report-B

	Name	**Position**	**Date**
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Report Contents

1 Introduction

1.1 Site Description

Frieze Sculpture 2019 (the ''site'') is situated in the southeast corner of Regent's Park, London. The survey area includes the area of The English Gardens that will be affected by the installation of the sculptures that form Frieze Sculpture 2019. The trees within the survey area are integral to the character of the park.

1.2 Proposed Works

The installation of up to 25 sculptures within The English Gardens are proposed. Works that are likely to affect retained trees include the movement of installation vehicles.

1.3 Aims of Study

To inform a planning application, Canopy Consultancy has been commissioned by Frieze Art Fairs to undertake a tree survey of the site, in accordance with British Standard (BS) 5837:2012 "Trees in Relation to Design, Demolition and Construction - Recommendations".

The aim of this report is to present the results of the survey, including a Tree Survey Schedule (TSS), an Arboricultural Implications Assessment (AIA), and an Arboricultural Method Statement (AMS). A Tree Protection Plan (TPP) has also been produced and accompanies this report as a separate drawing.

This report in no way constitutes a health and safety survey report. Where concerns for tree health and safety exist, the necessary and appropriate tree inspections should be carried out.

2 Methodology

The trees were inspected from ground level by consultant arboriculturist Neil Taylor on 2nd May 2019 and measurements taken in accordance with the recommendations set out in the BS 5837:2012. Canopy spreads were measured and plotted to the four compass points. Where direct access was not possible measurements have been estimated. The surveyed trees are colour coded on the accompanying tree survey drawing according to their relevant BS category.

The tree data collected is used to enable the current canopy spread of the surveyed trees and the Root Protection Area (RPA) to be plotted on the accompanying TPP. The RPA is defined by the formula in paragraph 4.6 from the BS 5837:2012 and may be refined by taking into account current on-site constraints to root activity such as buildings, earthworks and hard paving. This forms part of the design process for the proposed development.

3 Assessment

3.1 Tree Character Groups

The detailed results of the tree survey are provided in the TSS, in Appendix 1. In summary, the trees on the site are considered integral to the sylvan nature of the area. The trees can be divided into two distinct character groups as follows:

1. The first character group includes the large, middle aged and mature trees found growing across the site. In the main, the trees in this character group are in a good condition and provide a significant level of amenity to the wider landscape.

2. The second character group includes the smaller sized, young trees found growing across the site. The majority of the trees in this character group are in a good condition but due to their size, are of limited amenity value in the context of the wider area.

4 Arboricultural Implications Assessment (AIA)

4.1 Methodology

The AIA uses the information obtained in the tree survey to identify areas where the proposed installation may be at odds with accepted standards, in terms of a tree's requirements for space in which to maintain existing roots and shoots, and space for future growth.

The quality and relative importance of each tree is illustrated as a coloured polygon. The colour used relates to the BS categories as follows: A - green, B - blue, C - grey and U - red (see accompanying drawing reference 19-812-TPP-B). In general the design process will try to retain A and B category trees. Proposed construction will therefore normally be excluded from the RPA of A and B category trees. Red trees are discounted as they are recommended for removal.

Details of the trees surveyed are given in the TSS (Appendix 1). The juxtaposition of the proposed installation in relation to existing tree locations are shown on the accompanying TPP drawing, reference 19-812-TPP-B.

The AIA considers existing site conditions and the effect that they may have on the development of the surveyed trees root systems. Hard structures such as building and paved roads and paths can influence the root activity of trees by reducing the availability of both moisture and nutrients.

4.2 Assessment

Refer to the accompanying TPP, drawing, reference 19-812-TPP-B, for the relationship between the proposed installations and the trees on and adjacent to the site.

- No trees will be removed
- There will be no installations within the RPA of a retained tree.

5 Arboricultural Method Statement (AMS)

5.1 Methodology

The AMS provides the means by which retained trees and hedges can be protected throughout the development.

The movement of demolition and construction machinery in close proximity to trees may cause compaction of the soil which affects the tree's ability to absorb moisture and nutrients. The RPAs of retained trees and hedges will be protected by a tree protection barrier as described in paragraph 5.5 below and shown on the accompanying TPP, drawing number 19-812-TPP-B.

5.2 Demolition within the RPA of Retained Trees

There will be no demolition within the RPA of a retained tree.

5.3 Construction within the RPA of Retained Trees

There will be no installations within the RPA of a retained tree.

No materials or spoil is to be stored within the RPA of a retained tree.

In order to avoid damage to the retained trees the tree surgery and felling work identified in the accompanying tree survey schedule will be carried out prior to the occupation of the site by the building contractor. The work will be carried out in accordance with BS 3998:2010.

5.4 Services

No services will be required.

5.5 Tree Protection

All trees that are to be retained on the site will be protected by the use of a tree protection barrier erected in the location shown on the accompanying TPP, drawing number 19-812-TPP-B. The fence will consist of "Heras" type panels or similar braced at appropriate intervals and secured to keep in place. The tree protection barrier will be erected prior to the installation of each sculpture. Once the sculpture is installed, the tree protection barrier will be moved onto the next.

6 Conclusion

Canopy Consultancy was commissioned by Frieze Art Fairs to carry out a tree survey at Regent's Park.

No trees will be removed to enable the proposed installations.

Through the specified tree protection measures, it will be possible to minimise the impact of the proposed installations on the retained trees.

Overall, there are no known overriding arboricultural constraints which would prevent the proposed development from going ahead, subject to the protection measures specified within this report being correctly implemented.

7 Appendices

Appendix 1: Tree Survey Schedule

Project:	Frieze Sculpture 2019, Regent's Park			BS 5837 2012 Trees in relation to design, demolition and construction- recommendations							Surveyed by	NAT	CANOPYCONSULTANCY		
Ref:	19-812-TSS										Weather	Clear			
Date:	2.05.19										Tagged	No			
Client:	Frieze Art Fairs														
				Canopy Spread											
	Species	Height (m)	DBH (mm)	N	E	S	W	Stems	Height of crown clearance	Age class	Physiological condition problems/comments	Structural condition	Preliminary management recommendations	Estimated remaining contribution years	BS category
T1	tulip tree (Liriodendron tulipefera)	8	280	4	4	3	3	1	1.5	Y	Good	Good	None	40+	B2
T2	tulip tree (Liriodendron tulipefera)	6	190	3	3	3	3	1	2	Y	Good	Good	None	40+	B2
T3	purple leaved plum (Prunus ceracifera 'Pissardii')	5	410	3	0	4	6	1	1	MA	Good	Good	None	20-40	B2
T4	purple leaved plum (Prunus ceracifera 'Pissardii')	5	397	4	4	4	4	2	1	MA	Good	Good	None	20-40	B2
T5	dogwood (Cornus sp.)	6	320	4	5	4	4	1	1	M	Good	Good	None	20-40	B2
T6	London plane (Platanus x hispanica)	25	780	7	8	8	10	1	2	M	Good	Good	None	40+	A2
T7	London plane (Platanus x hispanica)	20	620	6	7	7	8	1	2	M	Good	Good	None	40+	A2
T8	cherry (Prunus sp.)	5	420	3	4	4	4	1	2	M	Good	Good	None	10-20	B2
T9	Caucasian wingnut (Pterocarya fraxinifolia)	8	160	4	3	3	3	1	2	Y	Good	Good	None	40+	B2

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T10	Caucasian wingnut (Pterocarya fraxinifolia)	10	210	4	4	4	5	1	1.5	Y	Good	Good	None	40+	B2
T11	Caucasian wingnut (Pterocarya fraxinifolia)	8	190	4	4	4	4	1	1	Y	Good	Good	None	40+	B2
T12	hazel (Corylus avellana)	3	400	4	2	3	3	1	0	M	Good	Good	None	40+	A2
T13	holm oak (Quercus ilex)	10	480	3	6	5	5	1	1	MA	Good	Good	None	40+	B2
T14	copper beech (Fagus sylvatica 'Purpurea')	12	520	6	5	5	5	1	1	MA	Good	Good	None	40+	A2
T15	judas tree (Cercis siliquastrum)	5	250	4	5	2	3	1	1	MA	Good	Good	None	40+	B2
T16	beech (Fagus sylvatica)	10	480	5	5	6	5	1	1	MA	Good	Good	None	40+	B2
T17	foxglove tree (Paulownia tomentosa)	7	350	4	4	4	4	1	3	MA	Good	Good	None	20-40	B2
T18	pride of India (Koelreuteria paniculata)	3	60	2	2	2	2	1	1.5	Y	Good	Good	None	40+	C1
T19	Indian bean tree (Catalpa bignodioides)	8	650	5	5	6	8	1	2	M	Good	Good	None	20-40	B2

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T20	cherry (Prunus sp.)	5	420	4	2	2	4	1	2	M	Fair	Good	None	10-20	C1
T21	cherry (Prunus sp.)	5	480	5	4	7	6	1	2	M	Fair - die back	Good	None	10-20	C1
T22	cherry (Prunus sp.)	4	170	2	3	3	3	1	1.5	Y	Good	Good	None	40+	C1
T23	cherry (Prunus sp.)	4	150	2	3	3	3	1	1	Y	Good	Good	None	40+	C1
T24	cherry (Prunus sp.)	5	160	3	2	4	3	1	1.5	Y	Good	Good	None	40+	C1
T25	monkey puzzle (Araucaria aracana)	3	120	1	1	1	1	1	0	Y	Good	Good	None	40+	C1
T26	deodar cedar (Cedrus deodara)	12	450	5	6	5	5	1	0	MA	Good	Good	None	40+	B2
T27	purple leaved plum (Prunus ceracifera 'Pissardii')	6	410	2	5	4	0	1	2	M	Good	Good	None	20-40	B2
T28	purple leaved plum (Prunus ceracifera 'Pissardii')	5	400	0	3	5	2	1	1	M	Good	Good	None	20-40	B2
T29	purple leaved plum (Prunus ceracifera 'Pissardii')	6	641	4	6	5	2	3	0	M	Good	Good	None	20-40	B2
T30	pine (Pinus sp.)	1	20	1	1	1	1	1	0	Y	Good	Good	None	40+	C1

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T31	mountain ash (Sorbus aucuparia)	1	20	1	1	1	1	1	0	Y	Good	Good	None	40+	C1
T32	holly (Ilex aquifolium)	7	353	2	2	2	2	2	0	MA	Good	Good	None	40+	B2
T33	holly (Ilex aquifolium)	5	250	3	3	3	3	1	0	MA	Good	Good	None	40+	B2
T34	cherry (Prunus sp.)	8	490	4	4	6	6	1	0	M	Good	Good	None	40+	B2
T35	cherry (Prunus sp.)	7	470	4	4	5	4	1	0	M	Good	Good	None	40+	B2
T36	cherry (Prunus sp.)	6	460	4	4	5	4	1	1	M	Good	Good	None	40+	B2
T37	holly (Ilex aquifolium)	6	300	3	2	3	3	1	0	MA	Good	Good	None	40+	B2
T38	holly (Ilex aquifolium)	6	300	3	3	3	3	1	0	MA	Good	Good	None	40+	B2
T39	common lime (Tilia x europaea)	15	710	6	5	6	5	1	0	M	Good - minor die back	Good	None	40+	B2
T40	cherry (Prunus sp.)	7	480	4	4	4	5	1	2	M	Fair	Good	None	20-40	B2
T41	Persian ironwood (Parotia persica)	3	30	1	1	1	1	1	0.5	Y	Good	Good	None	40+	C1

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T42	London plane (Platanus x hispanica)	18	680	11	8	9	9	1	0.5	MA	Good	Good	None	40+	B2
T43	tulip tree (Liriodendron tulipefera)	8	210	3	3	3	3	1	1.5	Y	Good	Good	None	40+	B2
T44	tulip tree (Liriodendron tulipefera)	8	250	3	4	3	3	1	2	Y	Good	Good	None	40+	B2
T45	crab apple (Malus sylvestris)	7	460	3	3	4	3	1	3	M	Fair - die back	Good	None	10-20	C1
T46	cherry (Prunus sp.)	4	400	2	4	3	3	1	2	M	Fair - die back	Good	None	10-20	C1
T47	cherry (Prunus sp.)	4	380	3	4	3	3	1	2	M	Good	Good	None	40+	B2
T48	cherry (Prunus sp.)	5	400	3	4	4	3	1	2	M	Fair - die back	Good	None	10-20	C1
T49	cherry (Prunus sp.)	5	380	4	2	3	4	1	2	M	Fair - die back	Good	None	10-20	C1
T50	sweet gum (liquidamber styraciflua)	7	240	3	4	4	3	1	0.5	MA	Good	Good	None	40+	B2
T51	holm oak (Quercus ilex)	12	810	6	6	7	7	1	1	M	Good	Good	None	40+	B2
T52	pride of India (Koelreuteria paniculata)	4	212	3	3	3	3	2	1	Y	Good	Good	None	40+	B2

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T53	maple (Acer sp.)	12	670	6	7	7	5	1	3	M	Good	Good - decay on stem	None	20-40	B2
T54	maple (Acer sp.)	11	550	5	5	5	5	1	4	M	Fair	Good	None	20-40	B2
T55	Turkey oak (Quercus cerris)	16	720	9	10	9	11	1	1.5	M	Good	Good	None	40+	B2
T56	mountain ash (Sorbus aucuparia)	4	80	1	2	2	2	1	2	Y	Good	Good	None	40+	B2
T57	bird cherry (Prunus padus)	5	220	2	4	4	4	1	2	MA	Good	Good	None	40+	B2
T58	holly (Ilex aquifolium)	7	360	3	3	3	3	1	0	MA	Good	Good	None	40+	B2
T59	holly (Ilex aquifolium)	8	380	3	3	3	3	1	0	MA	Good	Good	None	40+	B2
T60	holly (Ilex aquifolium)	7	472	3	2	3	3	2	0	MA	Good	Good	None	40+	B2
T61	mountain ash (Sorbus aucuparia)	6	150	3	3	2	2	1	2	Y	Good	Good	None	40+	B2
T62	Turkey oak (Quercus cerris)	16	960	9	10	9	10	1	2	M	Good	Good	None	40+	B2
T63	Raywood ash (Fraxinus angustifolia 'Raywood')	11	480	7	5	5	6	1	2	M	Good	Good	None	40+	B2

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T64	Raywood ash (Fraxinus angustifolia 'Raywood')	9	370	5	6	4	6	1	2	M	Good	Good	None	40+	B2
T65	Raywood ash (Fraxinus angustifolia 'Raywood')	11	450	6	8	5	7	1	2	M	Good	Good	None	40+	B2
T66	cherry (Prunus sp.)	3	30	1	1	1	1	1	0	Y	Good	Good	None	40+	C1
T67	common lime (Tilia x europaea)	6	120	2	2	2	2	1	1.5	Y	Good	Good	None	40+	B2
T68	cherry (Prunus sp.)	3	40	1	1	1	1	1	0	Y	Good	Good	None	40+	C1
T69	cherry (Prunus sp.)	6	380	4	5	4	3	1	2	M	Fair - die back	Good	None	10-20	C1
T70	cherry (Prunus sp.)	5	500	3	3	4	3	1	2	M	Fair - die back	Good	None	10-20	C1
T71	cherry (Prunus sp.)	4	360	3	2	2	3	1	2	M	Fair - die back	Good	None	10-20	C1
T72	cherry (Prunus sp.)	5	520	4	5	3	4	1	2	M	Fair - die back	Good	None	10-20	C1
T73	cherry (Prunus sp.)	6	420	4	4	4	4	1	2	M	Fair - die back	Good	None	10-20	C1

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T74	hybrid black poplar (Populus canadensis)	10	480	4	4	4	3	1	2	MA	Fair - die back	Good	None	10-20	C1
T75	hybrid black poplar (Populus canadensis)	9	440	5	5	5	4	1	2	MA	Good	Good	None	40+	B2
T76	magnolia (Magnolia sp.)	3	40	1	1	1	1	1	2	Y	Good	Good	None	40+	C1
T77	honey locust (Gleditsia triacanthos)	6	120	3	3	3	4	1	1	Y	Good	Good	None	40+	B2
T78	sweet gum (liquidamber styraciflua)	8	230	3	3	3	3	1	2	MA	Good	Good	None	40+	B2
T79	crab apple (Malus sylvestris)	6	180	3	3	4	3	1	2	MA	Good	Good	None	40+	B2
T80	ash (Fraxinus excelsior)	9	380	4	4	4	4	1	2	MA	Good	Good	None	40+	B2
T81	ash (Fraxinus excelsior)	9	360	3	4	4	4	1	2	MA	Good	Good	None	40+	B2
T82	Norway maple (Acer platanoides)	8	380	4	4	4	4	1	2	MA	Good	Good	None	40+	B2
T83	fig (Ficus carnea)	6	611	3	3	9	6	3	0	M	Good	Fair - propped stems	None	40+	B2
T84	crab apple (Malus sylvestris)	5	370	4	5	4	4	1	0	M	Good	Good	None	40+	B2

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T85	oak (Quercus robur)	12	670	6	9	5	8	1	2	M	Good	Good	None	40+	B2
T86	common lime (Tilia x europaea)	12	450	3	5	4	4	1	0	M	Good	Good	None	40+	B2
T87	purple leaved plum (Prunus ceracifera 'Pissardii')	5	410	3	4	4	4	1	0	M	Good	Good	None	40+	B2
T88	Turkey oak (Quercus cerris)	12	760	6	7	13	8	1	1.5	M	Good	Good	None	40+	B2
T89	Norway maple (Acer platanoides)	10	430	5	5	6	5	1	2	MA	Good	Good	None	40+	B2
T90	magnolia (Magnolia sp.)	2	20	1	1	1	1	1	0	Y	Good	Good	None	40+	C1
T91	hawthorn (Crataegus monogyna)	4	160	2	3	2	2	1	1.5	MA	Good	Good	None	40+	B2
T92	copper beech (Fagus sylvatica 'Purpurea')	15	680	6	5	5	6	1	1	M	Good	Good	None	40+	B2
T93	common lime (Tilia x europaea)	18	680	5	6	7	5	1	1	M	Good	Good	None	40+	B2
G1	tulip tree	Up to 10	Varied							Y	Good - line of small trees. Average DBH 300mm	Good	None	40+	B2

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G2	cherry plum, holm oak, pear, false acacia	Up to 10	Varied							Y-MA	Good	Good	None	40+	B2
G3	silver birch, cherry, walnut, Himilayan birch, dawn redwood	Up to 8	Varied							Y	Good	Good	None	40+	B2
G4	tulip tree	Up to 10	Varied							Y	Good - line of small trees. Average DBH 300mm	Good	None	40+	B2
G5	holm oak, cherry, hawthorn, dogwood	Up to 10	Varied							Y-MA	Good	Good	None	20-40	B2