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Arboricultural Report

7 The Grove
London
N6 6JU

November 2022

Introduction

1. This is an Arboricultural Report written by Russell Miller, an arboricultural consultant engaged by the owner of 7 The Grove, London N6 6JU (hereafter, the property).
2. The author was instructed to provide an Arboricultural Impact Assessment (AIA) in respect of the proposed landscaping works to the rear of the property.

Scope of Report

3. This is an Arboricultural Impact Assessment (AIA) regarding proposed landscaping works and trees in the rear garden of the property and those trees in adjacent properties whose crown or Root Protection Areas (RPAs) might be affected. It does not consider trees elsewhere or other issues.

Limitations

4. Trees are constantly changing, living organisms. The observations in this report are valid for a limited period of 12 months. Further tree inspections are required if an accurate understanding is to be achieved at any future date.

Trees in Relation to Development

5. This report is written by an experienced arboricultural consultant and relies on industry accepted standards. It adopts guidance contain in *British Standard 5837:2012 Trees in Relation to Design, Demolition and Construction – Recommendations*.
6. *BS5837* specifies how to protect trees to be retained during development, including how to calculate root areas requiring protection. It should be noted that dimensions for Root Protection Areas (RPAs) specified in BS5837 are **minimum** areas considered necessary for a tree to remain healthy.
7. *BS5837* **Root Protection Area (RPAs)** are circular and represent theoretical root areas. Tree roots are however very variable and follow natural rather than theoretical patterns. Roots will proliferate where soil conditions are favourable to their growth (i.e. water, air, nutrients). Roots cannot grow in very dry, compacted or anaerobic

mediums. Actual root areas for any tree will differ from BS5837 idealised circles. Therefore RPAs are indicative of the minimum area of soil requiring protection for a tree to be retained in healthy condition.

8. Changes to ground level can adversely affect roots as can compaction or anything that changes sub surface soil conditions.

The Survey

9. In accordance with BS5837 methodology all trees at the rear of the property with a diameter of, or over, 75mm (measured at 1.5m) were examined and their details recorded in a Tree Schedule (see Appendix 1). One tree in the rear garden at 5 The Grove was also noted due to its proximity to the proposed swimming pool.

10. Trees were surveyed on 3 March 2022 (before the severe drought of 2022). At that time there were 36 trees on site <75mm dia.

11. A total of 18 trees are planned for removal. Trees planned for removal are listed in a Tree Removal Schedule (Appendix 2).

12. The new landscaping will include 22 new trees and numerous tall shrubs. Trees to be planted are listed in a Tree Planting Schedule (Appendix 3). The proposed landscape and tree planting is designed by Tom Stuart-Smith Ltd. The author has not been instructed to advise on planting.

The Trees

13. The most valuable tree is an impressive mature hornbeam (Tree 1). This tree has the crown structure of a lapsed pollard. It has a useful life expectancy of over 40 years and is, according to *BS5837* criteria, an A1/3 Grade tree, meaning it is of high quality and valuable both as an amenity and to wildlife. This tree requires special protection and the proposed path under it will need to be constructed according to an Arboricultural Method Statement (AMS), see para 20-22 below.

14. The other 35 trees are younger. Unfortunately, many of the bigger specimens have significant defects.

15. Trees of note are:

- **Tree Group 2** – 4 modest stems of **Golden Willow**, one of which is dead. The remaining three have been pollarded at 4m. Useful

life expectancy is uncertain, but they will be **retained** as low pollards.

- **Tree 3** – **Purple Plum**: multi-stemmed from base. A major limb split out recently and the tree has had a height reduction. Plums are short lived and although it does offer some temporary wildlife value this tree will be **replaced** with a Japanese Yoshino cherry.
- **Tree 5** – a rare cultivar of **Japanese Red Cedar** (*Cryptomeria japonica* Cristata). When viewed this tree showed extensive dieback of older foliage but new foliage was healthy. Dieback appeared too extensive for cypress aphid. Longevity is uncertain but it is a value specimen and will be **retained**.
- **Tree 7** – multi-stemmed **Saucer Magnolia**. A good open specimen, somewhat constrained by its raised bed. To be **retained**.
- **Tree 8** - **Smooth Arizona Cyprus**. When examined this tree showed extensive dieback, like the *Cryptomeria* (T5) but worse in that lower branches had died off completely. Although *Cupressus arizonica* was thought to be highly resistant to Coryneum canker (Strouts 2010; Strouts & Winter 2000)[1]more recent research suggests susceptibility can vary.[2] The tree clearly has a disease, and the author believes this to be the cause (i.e. *Seiridium cardinale* – see also Tree 26 below). It will be **removed** and replaced with a Korean Dogwood (*Cornus kousa*).
- **Trees 16-25 Group** – An unusual 9m tall arbor of 10 **Lawson Cypress**. These are crowded, etiolated and have been crown raised**.** Although currently functional as a conifer tunnel, long term retention may prove difficult. The trees are planted very closely and are therefore stressed by competition leading to increased risk of disease spreading from infected trees nearby and or wind failure of stems with poor stem: height ratios. These trees will be **replaced by 5 new species** (English Oak, 2 Magnolia species, Korean Dogwood and *Hoheria*) offering much greater long term canopy cover, resilience and wildlife interest.
- **Tree 26** – This **Golden Monterey Cypress** has suffered multiple large limb tear outs and has extensive dieback, probably due to Coryneum canker (i.e. *Seiridium cardinale*). It is likely to lose more

[1] Arboriculture Research Note 39 2010; Diagnosis of Ill-Health in Trees, Second Edition (2000)

[2] https://www.cabi.org/isc/datasheet/49497 (accessed October 2022)

limbs and spread disease to other conifers. **Removal** and replacement by a large native Hornbeam will offer much better long term canopy cover and biodiversity value.

- **Tree 30** – **Willow Leaved Pear** – a small ornamental tree with some decay in the upper crown. To be **removed** to make way for the swimming pool.
- A small orchard **apple** (**Tree 31**) and a juniper shrub (Tree 32) will also be **removed** to make way for the swimming pool.
- **Tree 40** – a large **Mountain Gum** (*Eucalyptus dalrympleana*) at the end of the garden. This tree has large basal wounds on two sides, with exposed decaying sapwood. Reaction growth is good and the tree will be **retained**, at least in the short term.

Canopy Cover

16. Existing canopy cover is estimated to be approximately 340m^2. **Gross canopy loss is estimated at 136m^2**. This is less than suggested by the number of trees to be removed because the ten Lawson Cypresses are so closely planted.

17. The presence of dieback and probable Coryneum canker makes retention of many of the conifers undesirable for long term health of trees in the garden and the wider area.

18. New planting will provide instant new canopy cover of around 75m^2. This will leave a short-term net loss of around 61m^2. Assuming tree aftercare is appropriate **the new trees will soon restore and then exceed existing canopy cover**. The trees will need watering for at least two years, five in the case of the large hornbeam.

Tree Population Dynamics

19. The hornbeam is the only old tree in the garden. The Japanese Red Cedar, Saucer Magnolia and Mountain Gum are significant early mature specimens and, if they can be retained long term (see comments above), they will offer excellent maturity to the tree stock. The remaining trees are semi and early mature specimens, or short-lived species (Purple Plum), but apart from the yews have modest life expectancies.

20. Introducing new, healthy trees will add a new generation. Provided the planting stock, planting and aftercare are good, the new planting will add significantly to the long-term tree cover at the

property.

Roots and Root Protection Areas (RPAs)

21. An Arboricultural Method Statement (AMS) and Arboricultural Supervision Scheme of Monitoring have already been submitted in respect of building works at the property. These set out the parameters for, and operating conditions within, a Site-Specific RPA for the Hornbeam (Tree 1). This SSRPA extends further into the rear garden than would a generic circular RPA because it is likely roots occur in the SSRPA. This SSRPA must be observed for landscaping works and is therefore incorporated into the Tom Stuart-Smith Ltd Landscape Design Access Statement.

22. In so far as the landscape plan encroaches on the Hornbeam SSRPA and RPAs of any retained tree additional **specific additional AMS provisions may be required** to ensure minimal soil and root disturbance that could harm retained trees.

23. In addition to the above it must be remembered that RPAs, and even the SSPRA for the Hornbeam, are indicative and not actual locations of roots. Therefore, care must still be taken in areas adjacent to RPAs because roots may be present. Therefore, the original AMS recommends a precautionary approach and **hand digging for the foundations for the South Terrace**, even though these foundations have purposely been located outside the SSRPA. This, and excavations for the new pool, should be supervised by a suitably qualified arboricultural consultant.

24. Specific consideration will have to be given to the RPAs of Trees:

    - 1 Hornbeam - in respect of the excavations and build for the new South Terrace, construction of the Evening Terrace, the new path and any soil changes within the RPA;
    - 4 Crab Apple & 5 Red Cedar in respect of proposed new paths;
    - 27 Lilac, 34 yew and 35 hazel in respect of the pool construction;
    - 5T1 the Cider Gum in the garden of 5 The Grove in respect of the pool construction;
    - 28 Pittosporum in respect of the pool and new paths;
    - 37 Lawson Cypresses in respect of new paths;
    - 38 yew and 40 Mountain Gum in respect of the west seating

area and new paths.

Recommendations

25. An on-site briefing by a suitably qualified arboricultural consultant prior to commencement of works and subsequent supervision by a suitably qualified arboricultural consultant if required by the AMS.

Russell Miller

2 November 2022

GLOSSARY

AMS Arboricultural Method Statement – a specification for works written by a qualified professional who understands the requirements of trees.

CEZ Construction Exclusion Zone – area of no construction access, even on foot, without prior consultation with a qualified arboricultural consultant.

GPZ Ground Protection Zone – an area requiring temporary ground surfacing designed to avoid compacting the soil beneath.

High Priority Root Area - the part of the RPA likely to contain essential, primary roots part of which cannot be fenced off by the CEZ.

RPA Root Protection Area – the **minimum** area that must be protected if a retained tree is to survive; i.e. to avoid unacceptable root damage the entire RPA must be protected from trenching, digging, compaction, spillage and other construction activity unless as specified in an Arboricultural Method Statement.

Generic RPA – area around a tree defined by a circle of radius equivalent to 12 times the diameter of the tree (measured at 1.5m from the ground).

Specific RPA – root protection area defined by an arboriculturalist based on site specific conditions.

BS 5837 Tree Survey

Site	**7 The Grove, London N6**
Client	
Surveyor	**Russell Miller**
Survey date	**03/03/22**

Tree No.	SPECIES Common Name Scientific Name	Height m	Stem Diameter @ 1.5m mm # est	Branch Spread m	Age Class	Physio-logical Condi-tion	Struc-tural Condi-tion	Comments	Grade	Years remai ning	RPA radius m	Landscape Proposal
	TREES OF Ø >75mm on site											
1	Common Hornbeam Carpinus betulus	10	605	7	M	G	F	Close to house and terrace. Valuable old tree requires careful consideration (AMS) & root protection.	A1/3	40+	7.3	Retain
2 Group	Salix spp. Golden Willow?	4	209		M	F	F	One dead stem, 3 alive. Pollard every 5 years.	C2/3	10+	2.5	Retain
2 Group	Salix spp. Golden Willow?	4	175	3	M	F	F	Pollard every 5 years	C2/3	10+	2.1	Retain
2 Group	Salix spp. Golden Willow?	4	220		M	F	F	Pollard every 5 years	C2/3	10+	2.6	Retain
3	Purple Plum Prunus cerasifera Pissardii	4	495	4	M	F	P	Multi stem. Reduced recently. Large tear out at 0-0.5m E side, some decay.	C3	10+	5.9	FELL
4	Crab Apple Malus spp. (Malus baccata 'Columnaris'?)	4	#230	3	EM	F	F	Very fastigiate. Leaning to N. Cut out small cankerous lower limbs E side. Remove N subordinate limb for balance	C3	10	2.8	Retain

5	Japanese Red Cedar cultivar Cryptomaria japonica Cristata	11	314	4	EM	P	F	Rare cultivar with fasciation on most shoots. Lots of dieback in crown on older foliage. Healthy newer growth suggests not Coryneum canker?	C1	10	3.8	Retain
6	Common Yew Taxus baccata	4	286	3	EM	G	F	Maintained as topiary dome	B2	40+	3.4	Retain
7	Saucer Magnolia Magnolia x soulangiana	4	#350mm @ 0.5m	4	M	G	F	Multi stem with included bark @0.5-1m and elsewhere above. Otherwise good crown form. Inside raised bed.	B1	20+	4.2	Retain
8	Smooth Arizona Cyprus Cupressus arizonica ssp glabra	13	471	5	EM	P	G	Crown thin. Dieback in lower crown, also signs in upper crown (Coryneum canker ?). Fruiting heavily.	B1/C2	20?	5.7	FELL
9	Not present at time of survey											REMOVED
10	Not present at time of survey											REMOVED
11	Not present at time of survey											REMOVED
12	Common Yew Taxus baccata	3	#260	2	EM	F	P	Multi stemmed. Formative prune to 5m hedge	C2	40+	3.1	Retain
13	Common Yew Taxus baccata	3	290	2	EM	F	P	Formative prune to 5m hedge	C2	40+	3.5	Retain
14	Common Yew Taxus baccata	3	263	2	EM	F	P	Multi stemmed. Formative prune to 5m hedge	C2	40+	3.2	Retain
15	Irish golden yew Taxus baccata 'Fastigiata Aurea'?	3	191	2	EM	P	P	Recently topped	C2	40+	2.3	FELL

16 Group	Lawson cyprus yellow leaved Chamaecyparis lawsoniana Lane?	10	167	3	EM	F	P	Multi stem, etiolated, crown lifted, 8m "hedge/arbour".	C2	20+	2.0	FELL
17 Group	Lawson cypress varigated Chamaecyparis lawsoniana Albomaculata?	7	224 @ 0.9m	4	EM	F	P	Multi stem, etiolated, crown lifted, 9m "hedge/arbour".	C2	20+	2.7	FELL
18 Group	Lawson cypress Chamaecyparis lawsoniana	7	122	4	EM	F	P	Multi stem, etiolated, crown lifted, 9m "hedge/arbour".	C2	20+	1.5	FELL
19 Group	Lawson cypress Chamaecyparis lawsoniana	10	#125	3	EM	F	P	Multi stem, etiolated, crown lifted, 9m "hedge/arbour".	C2	20+	1.5	FELL
20 Group	Lawson cypress Chamaecyparis lawsoniana	10	#110	3	EM	F	P	Multi stem, etiolated, crown lifted, 9m "hedge/arbour".	C2	20+	1.3	FELL
21 Group	Lawson cypress Chamaecyparis lawsoniana	10	243	3	EM	F	P	Multi stem, etiolated, crown lifted, 9m "hedge/arbour".	C2	20+	2.9	FELL
22 Group	Lawson cypress Chamaecyparis lawsoniana	10	135	3	EM	F	P	Multi stem, etiolated, crown lifted, 9m "hedge/arbour".	C2	20+	1.6	FELL
23 Group	Lawson cypress Chamaecyparis lawsoniana Allumii?	7	341	4	EM	F	P	Multi stem, etiolated, crown lifted, 9m "hedge/arbour".	C2	20+	4.1	FELL
24 Group	Lawson cypress Chamaecyparis lawsoniana	10	#100	3	EM	F	P	Multi stem, etiolated, crown lifted, 9m "hedge/arbour".	C2	20+	1.2	FELL
25 Group	Lawson cypress Chamaecyparis lawsoniana	10	168	3	EM	F	P	Multi stem, etiolated, crown lifted, 9m "hedge/arbour".	C2	20+	2.0	FELL

26	Monterey Cypress cultivar Cupressus macrocarpa Lutea	10	599	7	M	P	P	Dieback in upper and S crown (Coryneum canker?). Large tear outs wounds @5m N side.	C2	10+	7.2	FELL
27	Lilac Syringa vulgaris	4	249	3	M	F	F	Multi-stem, prostrate. Large for species. Small brackets (Bjerkandera formosa, Trametes hirsuta?) x3 on prostrate W limb.	C2	10+	3.0	Retain
28	Kohuhu Pittosporum tenuifolium	4	286	3	M	F	F		C2	10+	3.4	Retain
29	Common Yew Taxus baccata	3	191	2	EM	G	F		B2	40+	2.3	FELL
30	Willow leaved pear Pyrus salicifolia	4	229	3	M	F	F	Top worked with inter stock. Some decay in upper branches.	C2	10+	2.7	FELL
31	Orchard Apple Malus domestica	4	262	3	M	G	P	Lopsided crown (grown out trained form?), with horizontal limb to N and younger vertical limbs to S.	C3	20+	3.1	FELL
32	Chinese Juniper Juniperus chinensis	4	106	3	EM	F	F		C2	10+	1.3	FELL
33	Common Yew Taxus baccata	3	<75	2							0.9	Retain
34	Common Yew Taxus baccata	3	<75	2							0.9	Retain
35	Corkscrew Hazel Corylus avellana Contorta	4	250	3	M	F	F	Nice old speciemen. Appears still vigorous. Retain.	B2	20+	3.0	Retain
36 Group	Lawson Cypress Chamaecyparis lawsoniana	7	150	4	EM	G	P	Crown conflict with big Eucalypt in garden at 5 The Grove.	B2	20+	1.8	Retain

37 Group	Lawson Cypress Chamaecyparis lawsoniana	7	150	4	EM	G	P	Crown conflict with big Eucalypt in garden at 5 The Grove.	B2	20+	1.8	Retain
38	Irish yew Taxus baccata fastigiata		<75								0.9	Retain
39 Group	Common Yew Taxus baccata	3	<75	2							0.9	Retain
40	Mountain Gum Eucalyptus dalrympleana	#14	#700	#8	M	F	P	Big wounds 0-1.2m on W and E sides. Soft decay, probe penetrates to 50mm. Further investigations required. Possibly historic fire damage.	C1/B1	10+	8.4	Retain
44	Common Beech Fagus sylvatica	#4	#200	#2	SM	F	F	Poor location, close to and under Eucalypt T40	C2	20+	2.4	Retain
	TREES OF Ø >75mm on adjacent land											
	5 The Grove Rear											
5/T1	Cider Gum Eucalyptus gunnii	13	760	8	M	F	F	Not inspected. Ganoderma and dimensions taken from another surveyor	B1	20+?	9.1	**Retain**

7 The Grove Tree Removal Schedule

Tree No.	SPECIES Common Name Scientific Name	Height m	Stem Diameter @ 1.5m mm # est	Age Class	Physio-logical Condition	Structural Condition	Comments	Category Grading	Years remaining
3	Purple Plum Prunus cerasifera Pissardii	4	495	M	F	P	Multi stem. Reduced recently. Large tear out at 0-0.5m E side, some decay.	C3	10+
8	Smooth Arizona Cyprus Cupressus arizonica ssp glabra	13	471	EM	P	G	Crown thin. Dieback in lower crown, also signs in upper crown (Coryneum canker ?). Fruiting heavily.	B1/C2	20?
15	Irish golden yew Taxus baccata 'Fastigiata Aurea'?	3	191	EM	P	P	Recently topped	C2	40+
16 Group	Lawson cypress (yellow leaved) Chamaecyparis lawsoniana Lane?	10	167	EM	F	P	Multi stem, etiolated, crown lifted, 8m "hedge/arbour".	C2	20+
17 Group	Lawson cypress varigated Chamaecyparis lawsoniana Albomaculata?	7	224 @ 0.9m	EM	F	P	Multi stem, etiolated, crown lifted, 9m "hedge/arbour".	C2	20+
18 Group	Lawson cypress Chamaecyparis lawsoniana	7	122	EM	F	P	Multi stem, etiolated, crown lifted, 9m "hedge/arbour".	C2	20+
19 Group	Lawson cypress Chamaecyparis lawsoniana	10	#125	EM	F	P	Multi stem, etiolated, crown lifted, 9m "hedge/arbour".	C2	20+
20 Group	Lawson cypress Chamaecyparis lawsoniana	10	#110	EM	F	P	Multi stem, etiolated, crown lifted, 9m "hedge/arbour".	C2	20+
21 Group	Lawson cypress Chamaecyparis lawsoniana	10	243	EM	F	P	Multi stem, etiolated, crown lifted, 9m "hedge/arbour".	C2	20+
22 Group	Lawson cypress Chamaecyparis lawsoniana	10	135	EM	F	P	Multi stem, etiolated, crown lifted, 9m "hedge/arbour".	C2	20+
23 Group	Lawson cypress Chamaecyparis lawsoniana Allumii?	7	341	EM	F	P	Multi stem, etiolated, crown lifted, 9m "hedge/arbour".	C2	20+
24 Group	Lawson cypress Chamaecyparis lawsoniana	10	#100	EM	F	P	Multi stem, etiolated, crown lifted, 9m "hedge/arbour".	C2	20+
25 Group	Lawson cypress Chamaecyparis lawsoniana	10	168	EM	F	P	Multi stem, etiolated, crown lifted, 9m "hedge/arbour".	C2	20+
26	Monterey Cypress (Golden) Cupressus macrocarpa Lutea	10	599	M	P	P	Dieback in upper and S crown (Coryneum canker?). Large tear outs wounds @5m N side.	C2	10+
29	Common Yew Taxus baccata	3	191	EM	G	F		B2	40+
30	Willow leaved pear Pyrus salicifolia	4	229	M	F	F	Top worked with inter stock. Some decay in upper branches.	C2	10+
31	Orchard Apple Malus domestica	4	262	M	G	P	Lopsided crown (grown out trained form?), with horizontal limb to N and younger vertical limbs to S.	C3	20+
32	Chinese Juniper Juniperus chinensis	4	106	EM	F	F		C2	10+

7 The Grove Tree Planting Schedule

SPECIES Scientific Name	Number	Comments
Taxus baccata	1	2m ht bushy
Cornus kousa	4	3.5m ht x 2.5m wide multi-stem
Eriobotrya japonica	1	2.5m ht bushy
Olea europaea	1	2m ht bushy
Magnolia grandiflora	2	2m ht bushy
Magnolia soulangeana	1	2m ht multi-stem
Quercus robur	1	2m ht feathered
Carpinus betulus	1	5m ht feathered
Hoheria sexstylosa Stardust	1	1.5m ht bushy
Prunus yedoensis	1	3.5m ht x 2.5m wide multi-stem

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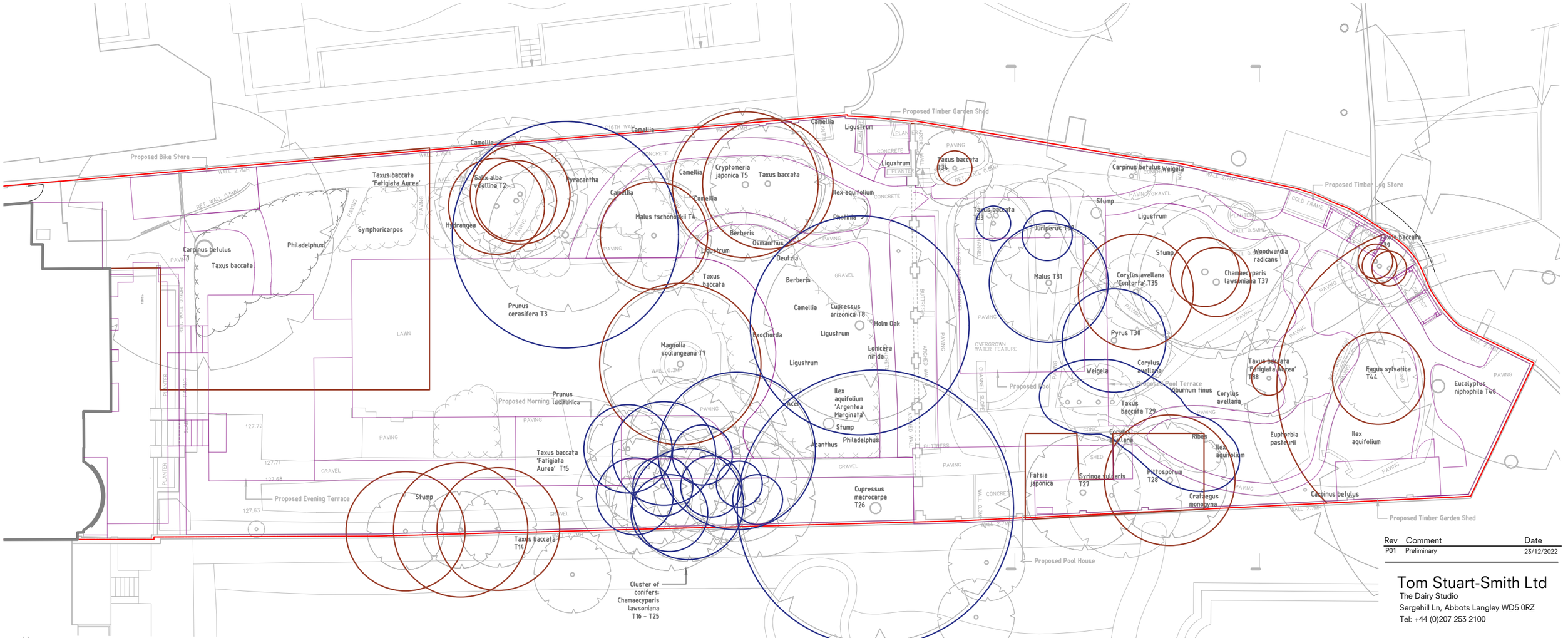

Key

- Tree Existing
- Approximate Root Protection Area of trees to be retained
- Approximate Root Protection Area of trees to be removed
- Garden Proposal
- Site Boundary

0 2m

Note:
Root Protection Area calculated by Arboricultural consultant Russell Miller.

See Arboricultural Report 402-L-1401 for detail.

Rev	Comment	Date
P01	Preliminary	23/12/2022

Tom Stuart-Smith Ltd
The Dairy Studio
Sergehill Ln, Abbots Langley WD5 0RZ
Tel: +44 (0)207 253 2100

Status: Preliminary

Project:
7 The Grove

Drawing:
Rear Garden -
Root Protection Area Plan

Scale: 1:200 at A3
Dwg: 402-L-P-109 Rev: P01

Drawn: ET
Date: 23/12/2022

ref:
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