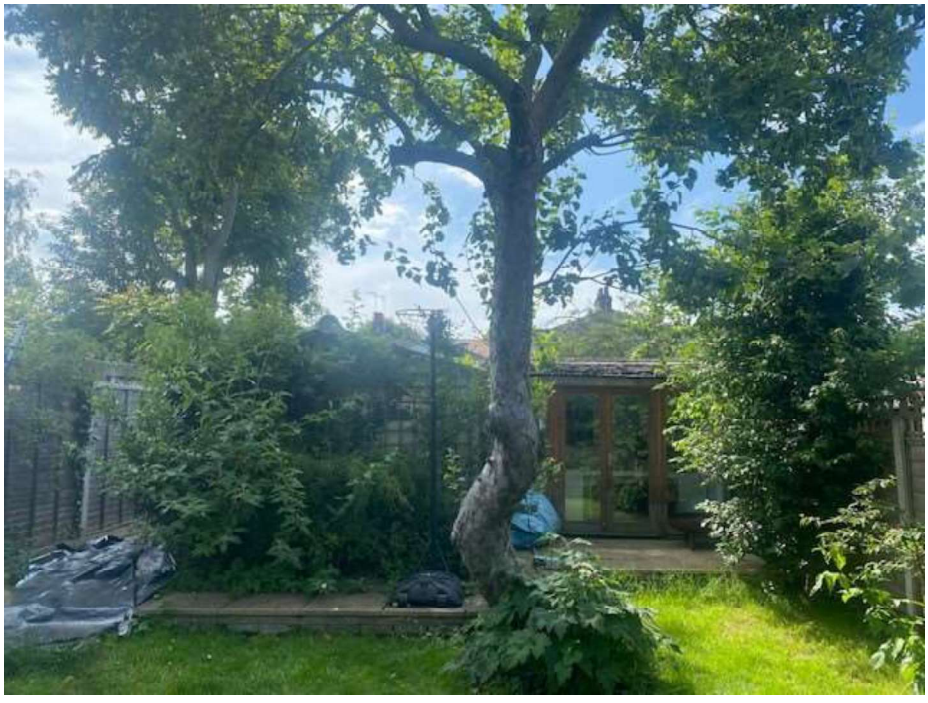
OMC Associates

BS 5837 Arboricultural Impacts Assessment

CLIENT:	Rixson
SITE:	18 East Sheen Avenue, SW14 8AS
OUR REF:	v220AIA/CJO/1407
DATE OF REPORT:	14 July 2021

Prepared by Christopher Overbeke MSc Arb, BA (Hons), ANC (Dist.), M, Arb A
Checked by Christian Sheldon ND (Arb), QCF L4 Dip (Arboriculture)



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EXECUTIVE SUMMARY

This report comprises an arboricultural impacts assessment to assist a planning application at 18 East Sheen Avenue, SW14. The proposed scheme involves removal of existing structures at the end of the garden and replacement with a new garden room. Two trees are noted, the C/B grade apple T1 and the off-site ash T2. The apple is mature but undistinguished as a consequence of unsympathetic pruning and crown lifting and provides no public amenity. The scheme involves, though does not necessitate, the removal of the C/B grade apple tree T1 and two new trees are proposed to replace it; these are shown on the tree constraints plan. The root protection area of the ash T2 has been assessed and shown not to extend as far as the site. The scheme does not, therefore, involve any RPA incursions and no impacts on retained trees are noted. No tree protection strategy is required.

1.0 INTRODUCTION

1.1 Brief

We are instructed to provide an arboricultural impacts assessment to assist a planning application at 18 East Sheen Avenue.

This report incorporates an arboricultural impact assessment and tree impacts plan demonstrating how trees in the immediate vicinity of the scheme may be affected by the proposed development and how trees may impact on the development.

It should be noted that the assessment is based on the impacts of the proposed development on trees and is based on the premise that all trees that can be realistically retained will be shown as retained.

Opinions expressed in this report in relation to the physical or aesthetic quality and value of trees are made on an impartial and non-prejudicial basis, based on observations made during the site survey.

Recommendations are consistent with the most recently revised version of the British Standard on this subject, “Trees in relation to design, demolition and construction - Recommendations”, BS 5837 (2012).

1.2 Background, planning proposal and documents

This report is commissioned to support a submission for a new garden room built on the footprint of existing structures or flags at the end of the garden.

1.3 Site Description

The property comprises a semi-detached property with a rectangular curtilage and an east west orientation fronting on to East Sheen Ave to the east.

To the rear is an approximately 28m long garden at the end of which are timber structures serving as a garage and an office. The rear boundary is delineated by a track and similar properties back on to the far side of this track.

A mature ash tree located off-site and a mature apple tree are noted for the purposes of this report.

Figure 1 - Site extents (Google Earth aerial image)

2.0 TREES

2.1 Trees data

Dimensions relating to height, crown spread (at four cardinal points), girth at 1.5m as well as age class, structural and physiological condition and BS 5837 (2012) category are noted.

The inspection assesses the height of the crown and suitability to develop near to it.

This survey does not include a detailed assessment of the health of the trees, but clear faults are factored into structural and physiological categories.

2.2 Trees and the law

It is understood that the site is located within a Conservation Area.

Please note that no works to, or around trees should be carried out without the approval of the Local Planning Authority since it is likely to incur large fines, or unless planning permission has been granted that indisputably necessitates the removal or pruning of any of the trees included within this report.

Section 197 of the Town & Country Planning Act 1990 states that it shall be the duty of the local planning authority to ensure whenever it is appropriate, that in granting planning permission, "*adequate provision is made, by the imposition of conditions, for the preservation or planting of trees*". Even when no specific legal protection exists, it may be necessary to obtain a felling license from the Forestry Commission if the volume of timber removed exceeds felling license quotas.

Section 15 of the National Planning Policy Framework adopted in July 2019 states that, "Planning policies and decisions should contribute to and enhance the natural and local environment" and Section 12 states that, "Planning policies and decisions should ensure that developments are…..visually attractive" and "sympathetic to the local landscape".

The Council's Local Plan also contains policies relating to the protection and retention of trees and landscape.

2.3 Tree schedule and summary of trees

Details of trees are provided in the tabulated information at Appendix A.

Two trees of relevance are noted. Within site is a mature apple T1 and off-site within the curtilage of 19, Palewell Park is mature ash T2.

T1 is a mature apple that has been subject to rather unsympathetic pruning. It has no public amenity value and limited arboricultural value. It is regarded, therefore, as a C/B grade tree.

The ash T2 is a large specimen. Though not surveyed due to access issues, it has a somewhat indifferent, acutely asymmetric form but is prominent and as such categorised a B2 tree.

3.0 TREE RELATED SITE CONSTRAINTS – GENERAL

3.1 Constraints to development posed by tree crowns/canopies

Where crown/canopies of trees to be retained overhang a development site, careful assessment of the implications must be made.

There are no constraints to development.

3.2 Longer term implications of retained trees on quality of life

New structures and parking spaces close to trees may give rise to some long-term resentment of the trees through a variety of causes, some real and some perceived, resulting on pressure to remove the trees. These can include loss of ambient light or sunlight, leaf/needle litter and other debris from trees accumulating in gutters and gardens, sticky residues (honeydew) on surfaces and cars, provision of perches for birds - particularly pigeons - and consequent bird droppings and anxiety stemming from the presence of large trees close dwellings.

There are no longer term problems associated with retained trees.

3.3 Indirect damage (subsidence/heave)

All new buildings must be cognisant of the shrinkability of the ground and ensure foundations are designed in full compliance with Chapter 4.2 of the NHBC guidelines "Building near trees", 1992, to ensure future co-existence with trees and new buildings.

4.0 ARBORICULTURAL IMPLICATIONS ASSESSMENT (AIA)

4.1 Effect of development on trees - General

The objective of the report is to identify and evaluate the extent of direct and indirect damage on existing trees that may arise as a result of the implementation of the proposed development without appropriate guidance. A tree may take a century to reach maturity, but it can be irretrievably damaged in a few minutes often because of a failure to appreciate the vulnerability of trees and particularly the root systems. *Irreparable damage is frequently done to existing trees in the first few days of a contractor's occupation of a site.* It is important to be aware that the effects of tree damage may not be apparent for some time.

There are a multitude of activities that can kill or damage trees on construction sites and there is a need to be mindful of these activities and why they may be so harmful to trees. These are briefly summarized below.

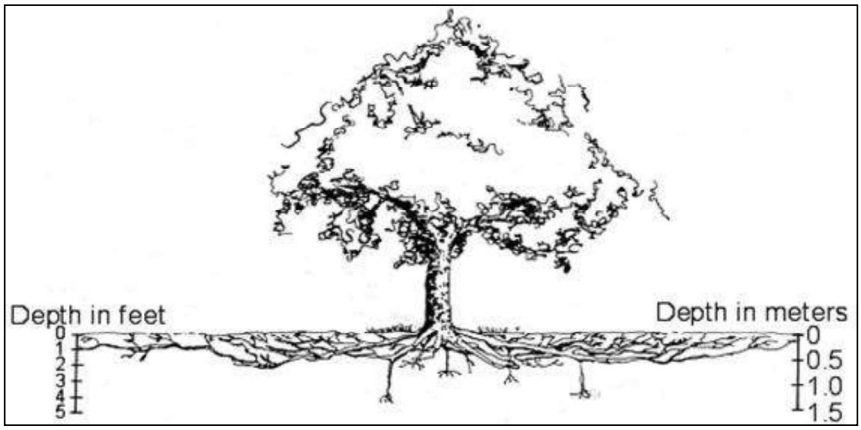


Figure 1 Typical root distribution of tree roots

4.1.1 Direct mechanical damage (*Referred to as D-1 in this report*)

Direct damage to the crown or stem is unlikely to kill a tree unless it is significant but may disfigure it and result in long-term decay setting in. This often occurs as a result of construction activities taking place too close to trees without protection or appropriate pre-construction tree surgery.

4.1.2 Ground compaction (*Referred to as D-2 in this report*)

This is likely to be the most common cause of tree death or decline on a building site. The vast majority of tree roots are located in the upper soil horizons where soil conditions are most favourable for root growth. It is these upper horizons that are most vulnerable to ground compaction. Compaction destroys soil structure, and this prevents soil moisture absorption into the ground and loss of natural aeration. This process deprives tree roots of moisture as well as giving rise to root asphyxiation and is often fatal to trees.

4.1.3 Changes in ground level (*Referred to as D-3 in this report*)

The majority of a tree's root systems are generally located in the upper 0.6m of the ground and the bulk of these roots happen to be very small, delicate and essential feeder roots. Reductions in ground level such as soil stripping can be catastrophic for a tree's health. Conversely increases in ground level can result in root asphyxiation.

4.1.4 Severance of roots by ground works (*Referred to as D-4 in this report*)

Excavation of ground to remove old foundations and hard standing, construction of conventional concrete footings, new hard standing or the installation of services such as water/sewerage pipes, gas/electricity cables, TV/telephone cables using open trenching within the drip-lines of trees severs any roots present, potentially leading to destabilization, decline or death of trees. It May also have implications for local soil hydrology.

4.1.5 Contamination of ground (*Referred to as D-5 in this report*)

Spillage of petrol, diesel, paint removers, wood preservatives and many other toxic liquids regularly used on building sites can kill roots.

4.1.6 Change in ground surface (*Referred to as D-6 in this report*)

Covering surfaces with impermeable materials – especially areas that were previously open ground can prove fatal for tree roots. Trees derive moisture from regular moisture recharge of the ground and nutrients generated by the nutrient cycle from decomposing leaf litter. Impervious surfaces can also prevent gaseous interchange between the ground and the atmosphere creating a build-up of toxic waste gases such as carbon dioxide and a deprivation of oxygen.

4.2 Effect of development on trees specific to this site

4.2.1 Tree Work

It is proposed that the C/B grade apple T1 is removed (it is understood that this will be subject of a CA Notice shortly).

Though the scheme can progress with it being retained, the applicant would rather see it replaced with two new, small species trees that can be juxtaposed more appropriately with the new structure.

The apple has no public amenity value and has been subject to unsympathetic pruning and crown-lifting in the past. Its removal should not, therefore, be regarded as a material basis to object.

4.2.2 RPA (Root Protection Area) Encroachment

An RPA is defined in BS 5837 (2012) as “the area surrounding a tree that contains sufficient rooting volume to ensure the survival of the tree”. The 2012 British Standard formula for calculating the RPA has been used in conjunction with prevailing existing site conditions that can affect root morphology and dispositions such as the presence and type of hardstanding, structures and underground apparatus; topography and drainage; tree health and vitality; species type of root severed; disposition of incursion and the soil type and structure to determine likely RPAs.

The British Standard states that incursion "should not exceed 20% of any existing unsurfaced ground within the RPA".

The scheme involves no RPA incursion (following removal ofT1).

The RPA of the large off-site ash T2 is shown on the tree implications plan which demonstrates that it does not encroach upon the site at all.

4.3 Issues to be addressed by an AMS:

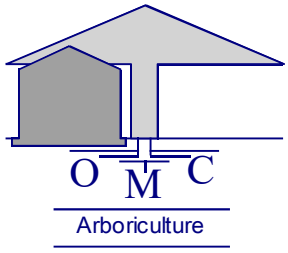
Not applicable.

5.0 CONCLUSION

The scheme involves, though does not necessitate, the removal of the C/B grade apple tree T1. This will have no impact on public amenity and only minimal impact on the prevailing landscape. Two new trees are proposed to replace T1 and these are shown on the tree constraints plan.

Only one other tree of potential relevance is noted. This is a large off-site ash tree T2. Its root protection area has, however, been assessed and shown not to extend as far as the site. The scheme does not, therefore, involve, any RPA incursions.

In consequence there are no impacts on retained trees and no tree protection strategy is required.



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Appendix A Tree survey schedule

ID	Species	Age Class	Dia. At 1.5m (mm)	Height (m)	Crown Height	1st branch	Crown Radius				SULE	Condition Physiological	Condition Structural	RPA Radius (m)	Quality Category (BS:5837)	Tree-Work	Site: Hoys House, Wixoe CO10 8UD OMC Associates www: omc-associates.co.uk Comments
							N	S	E	W							
T1	*Malus domestica* Apple	M	300	5.1	3.7	3.7-SW	2.5	2.5	2	2.5	20-20	Fair	Fair	3.6	C/B2	RA	Crown-lifted to 3.7m; flush cuts on stem; somewhat compromised form; stem kinked at base
T2	*Fraxinus excelsior* Ash	M	800* (Base)	16.8	2.4	4-N	8	8.2	9.2	7	>40	Good	Fair	9.6	B2	N	Off-site; large multi-stemmed specimen; asymmetric form

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Appendix B - Key for Tree Schedule and Cascade chart explaining tree quality assessment

KEY TO TREE SCHEDULE REFERENCES

Prefix: **T –** Tree **S** – Shrub/Climber **TG/SG** – Group/Hedge of **T**rees or **S**hrubs **Dia.:** **N/A -** Tree less than 100mm (for shrubs: young, semi-mature or mature)

***** Estimated

Age Class:

Young:	Generally less than 10 years old and high life expectancy
Semi-mature:	Within first 30% of life expectancy and significant growth to be expected
Early-mature:	Typically 30-60% of life expectancy, full size almost reached
Mature:	Typically 60% or more of life expectancy, full size reached with very gradual, slight further increases in size
Veteran	A stage of development where intervention/management may be required to ensure the tree remains safe
Over-mature:	Where a tree is so senescent that management is not worthwhile

Life Expectancy: How many years before tree is likely to need removing (subject to human intervention) **Crown Radius:** If crown is symmetrical, one dimension is given for the radius followed by "S"

B.S. Category: **See Appendix 2**

Physiological Condition:

Good:	Healthy tree with no symptoms of significant disease
Fair:	Some disease noted and/or vitality is below what would be expected
Poor:	Significant disease noted and/or very low vitality
Very Poor:	Tree is in severe decline

Structural Condition:

Good:	No significant structural defects
Fair:	Defects noted but not sufficient to warrant immediate work
Poor:	Significant defects. Monitoring and/or remedial works required
Very Poor:	Significant defects requiring immediate work or tree removal

Space Below Crown: A useful indicator to determine the practicality of developing below the crown. Rather than a measurement which can be misleading and open to interpretation.

Y	Potential to develop below the dripline with either no treework or removal of limbs that will not adversely affect the health and appearance of the tree
N	No scope to develop below the dripline of the tree
N/A	Tree to be removed

Treework: This is general since the report is not a tree-work specification. It indicates:

H	High priority. For trees to be retained and where work required to make safe
L	No urgent work required but would benefit from some intervention
N	No treework identified as necessary in the foreseeable future
P	Facilitation tree surgery advised
R	Remove – tree identified to be removed because "U" category tree
RA	Tree removed to accommodate development
WA	Treework to accommodate development
IV	Sever and remove ivy

B.S. Category:

A - Those of high quality and value i.e. make a substantial contribution;

B - Those of good/moderate quality and value, might be Cat. "A" but slightly impaired

C - Those of low quality i.e. adequate to remain until new planting is established or young trees with a stem diameter less than 150mm at 1.5m height

U - Those of such poor condition that any existing value would be lost within 10 years

1 - Mainly Arboricultural value **2 - Mainly Landscape value** **3 - Mainly Ecological value**

BS 5837:2012 Cascade chart for tree quality assessment (Table 1)

Category and definition	Criteria (including subcategories where appropriate)			Identification on plan
Trees unsuitable for retention				
Category U Those in such condition that they cannot realistically be retained as living trees in the context of the current land use for longer than 10 years.	• Trees that have a serious, irremediable, structural defect, such that their early loss is expected to collapse, including those that will become unviable after removal of other U category trees (e.g. 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 stability of other nearby trees (e.g. Dutch elm disease), or very low quality trees suppressing adjacent trees of better quality. **NOTE:** Category U trees can have existing or potential conservation value which it might be desirable to preserve.			DARK RED
	1 Mainly arboricultural qualities	**2 Mainly landscape qualities**	**3 Mainly cultural values, including conservation**	
Trees to be considered for retention				
Category A **Trees of high quality** with an estimated remaining life expectancy of at least 40 years	Trees that are of particularly good examples of their species, especially if rare or unusual; or those that are essential components of groups, or of formal or semi-formal arboricultural features (e.g. the dominant and/or principal trees within an avenue)	Trees, groups or woodlands of particular visual importance as arboricultural and/or landscape features	Trees, groups or woodlands of significant conservation, historical, commemorative or other value (e.g. veteran trees or wood-pasture)	LIGHT GREEN
Category B **Trees of moderate quality** with an estimated contribution of at least 20 years	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 growing as groups or woodlands, such that they attract a higher collective rating than they might as individuals; or trees occurring as collectives but situated so as to make little visual contribution to the wider locality	Trees with material conservation or other cultural value	MID BLUE
Category C **Trees of low quality** with an estimated contribution of at least 10 years, or young trees with a stem diameter below 150mm	Unremarkable trees of very limited merit or such impaired condition that they do not qualify 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/transient landscape benefits	Trees with no material conservation or other cultural value	GREY

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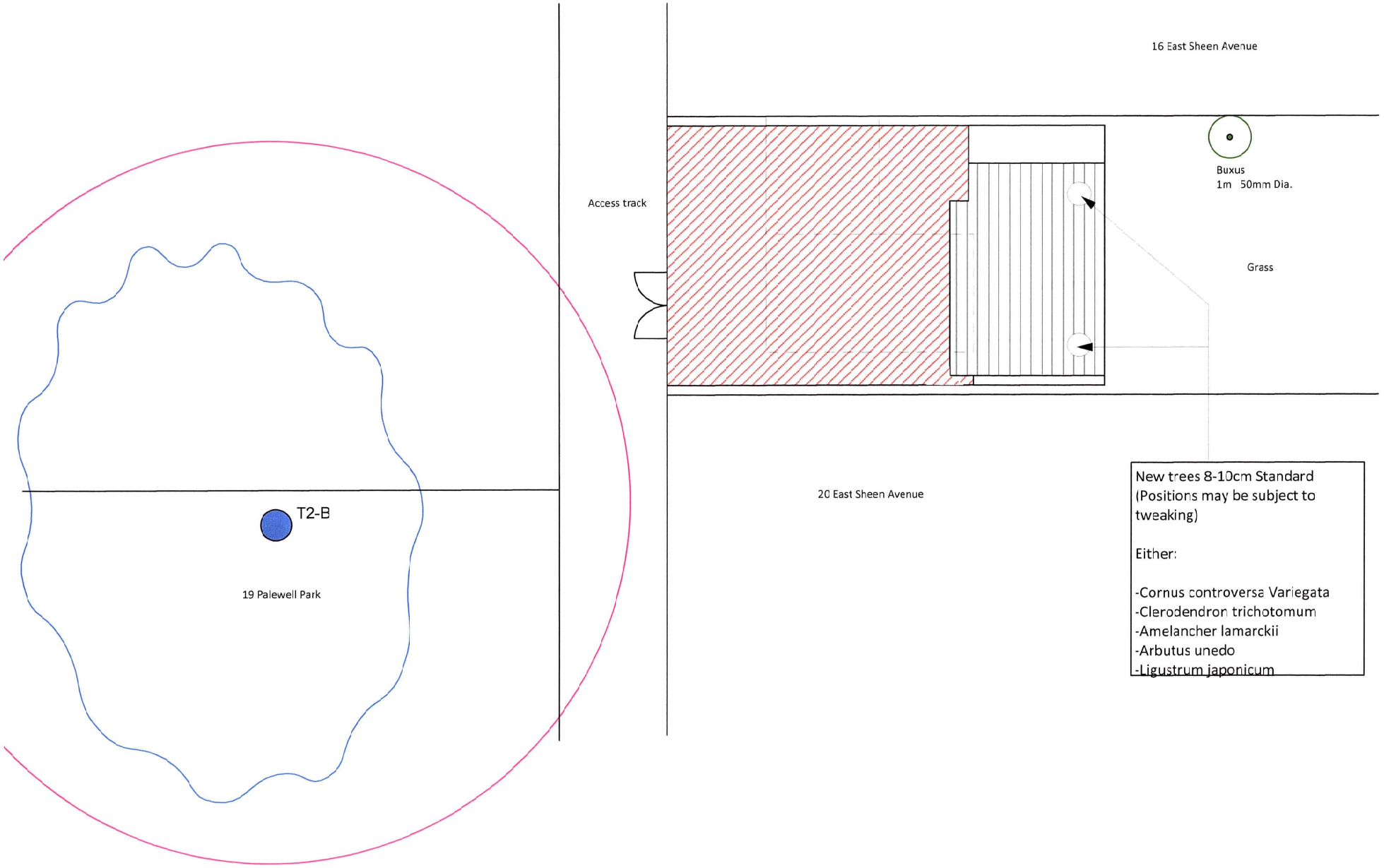
Appendix C - Tree Constraints Plan



To be read in colour

0 1 2 5 10

Nominal Root Protection Area (RPA)

Removed structure

CLIENT: Rixson
DATE: July 2021
SCALE: 1:100 on A3
REV:

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SITE: 18 East Sheen Avenue, London, SW14 8AS
JOB: v220_tcp
TITLE: TREE CONSTRAINTS PLAN

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Appendix D - Tree Survey Plan

To be read in colour

0 1 2 5 10

Dripline and stem - colour denotes BS 5837 category

- A Grade
- B Grade
- C Grade
- U Grade

Proposed structure

Broken crown line and red text indicates removal

CLIENT: Rixsor
DATE: July 2021
SCALE: 1:100 on A3
REV:

OMC ASSOCIATES
T: 01223 842253
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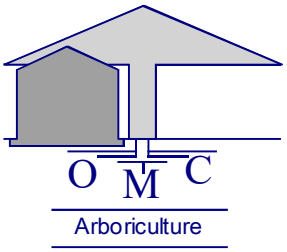
SITE: 18 East Sheen Avenue, London, SW14 8AS
JOB: v220_sv
TITLE: TREE SURVEY PLAN



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Appendix E – Photographs

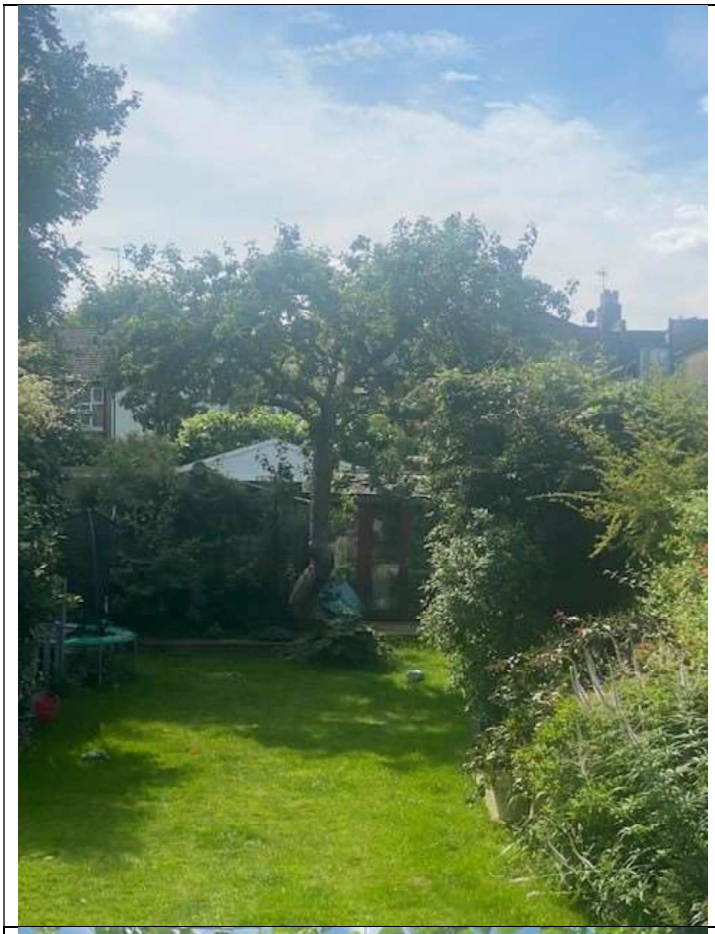
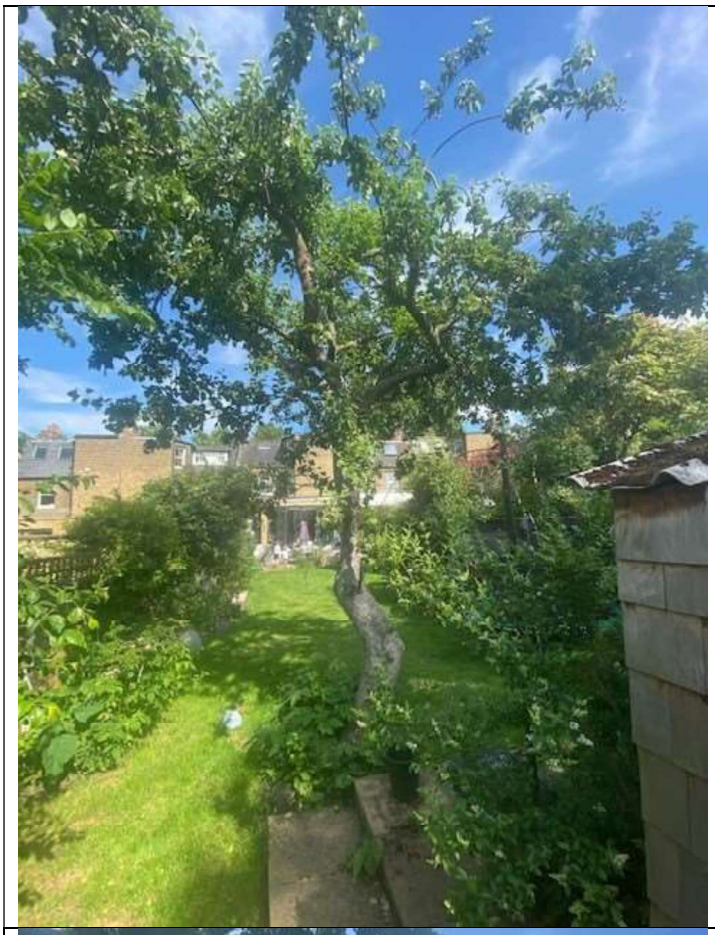
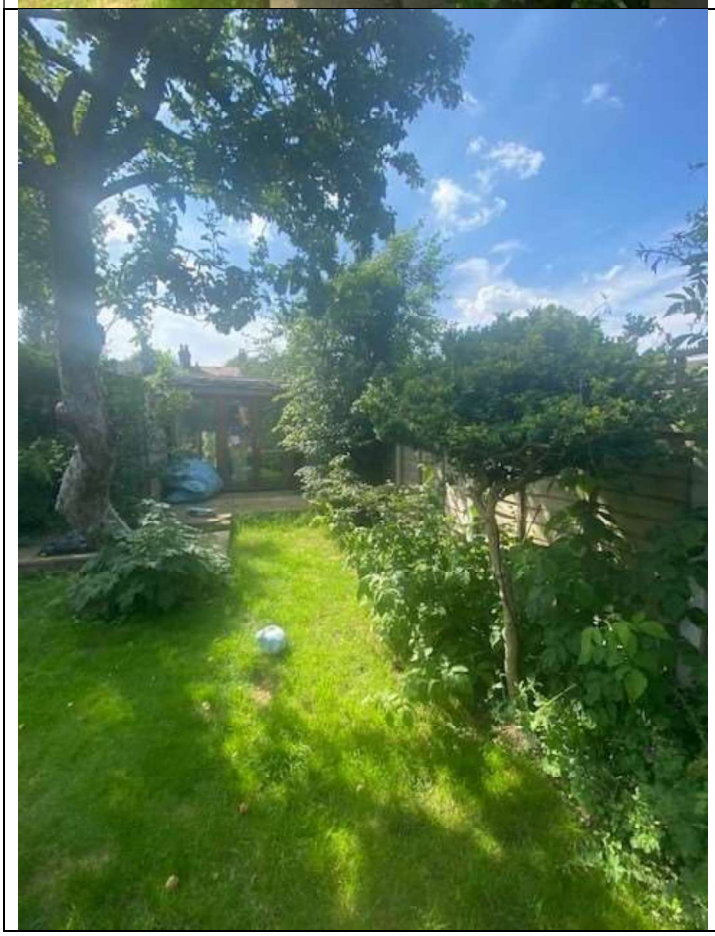


Photo 1

- T1 looking west
- Edge of canopy of T2 just visible far left

Photo 2

- Cherry sapling

	**Photo 3** • T1 looking east
	**Photo 4** • T1 on left • Small box tree in foreground

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Appendix F – Summary of arboricultural impacts

ID	SPECIES	CAUSE OF IMPACT	CONSEQUENCE OF IMPACT
T1	*Malus domestica* Apple	Close to proposal; subject to a CA Notice to remove	Removal & replacement with 2 trees
T2	*Fraxinus excelsior* Ash	None	N/A

	Facilitation pruning of canopy and/or root pruning/protection
	Removal
	Some protection required

**** Removal suggested for arboricultural/landscape enhancement reasons***

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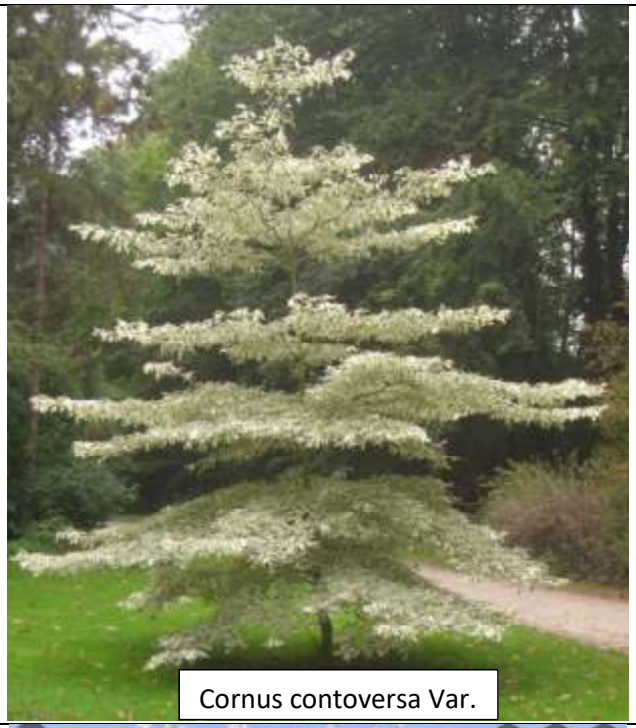
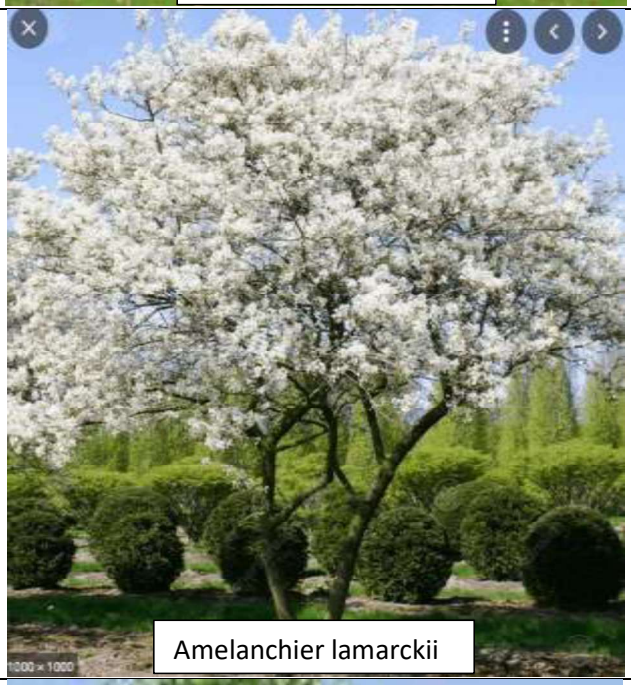
Appendix G – Suggested replacement trees



Cornus contoversa Var.

Clerodendron trichotomum



Amelanchier lamarckii

Arbutus unedo

Ligustrum japonicum