Sharon Hosegood
ASSOCIATES

ARBORICULTURAL METHOD STATEMENT REPORT

BS 5837:2012 '*Trees in relation to design, demolition, and construction' - recommendations*

ams

PURSUANT TO DISCHARGE CONDITION 27

SITE:

Castlewood W1A,

New Oxford Street,

London W1A

CLIENT:

Royal London UK Real Estate Fund

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DATE: 31 December 2019 Rev A 20 October 2021

OUR REF: SHA 188 Rev A

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Executive summary

This report provides information in accordance with the tree related planning condition 27 *'Demolition of existing office building at Castlewood House (Class B1), and erection of an 11 storey office building (Class B1) with retail and restaurant uses (Class A1/A3) at ground floor level; enlargement of existing double basement level and formation of roof terraces and rooftop plant along with associated highways, landscaping, and public realm improvement works. Partial demolition of Medius House with retention of the existing façade, and erection of a two storey roof extension including private roof terraces, in connection with the change of use of the building from office (Class B1) and retail (Class A1) to provide 18 affordable housing units (Class C3) at upper floor levels with retained retail use at ground floor level'* at Castlewood W1A, New Oxford Street, London W1A . All information provided is in accordance with BS 5837:2012 '*Trees in relation to design, demolition and construction – Recommendations*'.

This report follows the approved Arboricultural Impact Assessment (reference *SHA 188 AIA Revision A* dated 7 January 2017). There are no additional changes to tree removals from the original report. Street trees T1 and T2 will require pruning on the building side to facilitate scaffolding. Whilst the tree work is not ideal, the trees are fairly young and have a good vitality. The pruning is preferable to removing the trees. T3 will require a minor crown reduction to facilitate enabling works, and as the tree has a good vitality and is young, this should have no detrimental effect.

The purpose of this report is not only to provide information for the discharge of planning conditions, but more importantly, to provide clear recommendations during demolition and construction. The key areas of information are the following:

- The tree protection plan (appendix 2) and specification (appendix 3)
- The tree surgery schedule (appendix 4)
- The method statements at section 5 - **Revision A relates hard and soft landscaping near T3 and T4 field maple. For ease of reading, all revised pages are edged blue on the right hand side.**

Arboricultural site supervision is recommended at the following key stages:

- During pruning and installation of the scaffold near T1 and T2 (a pre-commencement meeting with relevant parties)
- During changing of surfacing and cycle stands near T3 and T4

Visits will be recorded and the site supervision notes will be sent to Camden Council, via the client, as an audit trail.

Contents

Appendices

1.0 Introduction

1.1 This report is for the purpose of providing information to comply with the requirements of planning condition 27 of 2017/0618/P. It is intended for submission to Camden Council and for use by the contractor on site. It follows on from the approved Arboricultural Impact Assessment.

2.0 Statement of instructions and issues discussed

2.1 I was instructed by CBRE on behalf of Royal London UK Real Estate Fund to carry out the following:

- To review the Arboricultural Impact Assessment, Planning Condition and demolition and construction plan
- To produce relevant arboricultural method statements where required
- A tree protection plan and tree protection specification

All works are to BS 5837:2012 '*Trees in relation to design, demolition and construction – recommendations*' (BS).

2.2. The issues discussed are the condition of the trees on site, the impact from the approved development and the long term view of the treescape for the site.

3.0 The trees

3.1 *Generally*: There are six trees which form the subject of this survey, two of which are on site. Full details are found in the survey sheets at appendix 1 and their location on the tree protection plan *SHA 188 TPP Rev B* at appendix 2.

3.2 Medius House is located within the Bloomsbury Conservation Area. A check with Camden Council on 3 June 2016 confirmed that the trees are not protected by a Tree Preservation Order. The only tree which falls within the conservation area is one of the street trees, T2. The four street trees (T1, T2, T3 and T4) are managed by Camden Council and any works to these trees must be carried out by their approved contractors.

3.3 *Summary:* All street trees will be retained and protected during works in accordance with this method statement.

3.4 Details of the trees can be found in the tree survey sheets at appendix one. The tree protection plan (*SHA 188 TPP Rev B*) shows trees to be removed, trees to be retained, tree protection measures and areas where arboricultural method statements apply. The tree

surgery schedule at appendix 4 list works needed to facilitate consent and also works for safety reasons and good arboricultural management. The following detail is on the trees to be retained only as the trees to be removed (T5 grey alder and T6 Italian alder) have been agreed by virtue of the approval of the Arboricultural Impact Assessment.

3.5 T1 and T2

These are both street trees managed by Camden Council. They are of moderate value and in early maturity. They are 11m high with an average crown spread of 6m. They have been historically crown lifted to clear the traffic, however T1 has a large wound on the lowest branch over the road as a result of being hit by a passing vehicle.

Arboricultural impact

The trees are within the ownership of Camden Council. A proposed north-south footpath from Bucknall Street to New Oxford Street will open up a vista of T1 from the south. Heavy pruning on the southern side of the crown is required to facilitate the scaffold bridge (T1) and the combination of fire escape and pedestrian tunnel with cabins above (T2). Compensatory pruning is required on other aspects of the crown to ensure that the crowns will not become completely unbalanced. This is shown diagrammatically on the plan extract below:

Plan 1 – extract from SHA 188 TPP Rev B. Do not scale. North is vertical. Bright green shaded area is the pruned crown.

Further details on tree protection are found at appendix 3. There will be a pre-commencement meeting with the tree contractor, scaffolding contractor, arboricultural

consultant and Arboricultural Officer from Camden Council to fully specify this work, in order to carry out only what is strictly necessary.

3.6 T3 and T4 field maple

These two early mature trees are growing in a wide stretch of pavement on the western side of Castlewood House, fronting Earnshaw Street. They provide an attractive focal point and are the only trees in the immediate vicinity. T3 is a very good example of its species and has been classified as an A class (high value) under BS 5837:2012. It is 7m high with a crown spread of 7m. T4 is also an important tree, but with a very slightly lower vitality than T3.

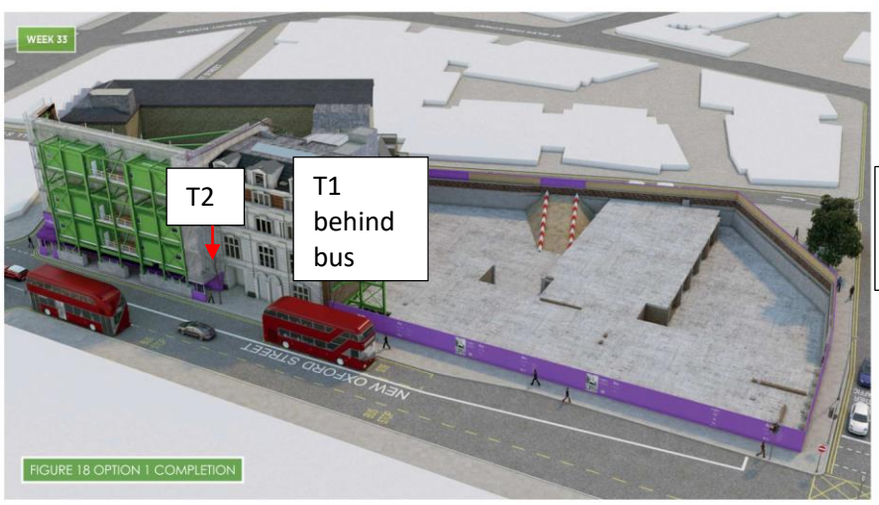
Arboricultural impact

The root protection areas of the trees do not extend up to the wall, therefore the demolition of the wall, or any changes of level within the do not require an arboricultural method statement.

The area to the east of the trees will become public realm thus increasing the role of the trees in the landscape. The trees are managed by Camden Council. The cycle stands and hard surfacing will be removed with care in accordance with an arboricultural method statement. The trunks will be triple wrapped in hessian during the external works phase. The works will be supervised to ensure that the root function and integrity is not affected. The hoarding will be erected along the existing wall and a small crown reduction is required to T3, and pruning to T4, to ensure no overhang into the site during works.

4.0 The approved development and construction programme

4.1 Planning consent for *Description of Development: Demolition of existing office building at Castlewood House (Class B1), and erection of an 11 storey office building (Class B1) with retail and restaurant uses (Class A1/A3) at ground floor level; enlargement of existing double basement level and formation of roof terraces and rooftop plant along with associated highways, landscaping, and public realm improvement works. Partial demolition of Medius House with retention of the existing façade, and erection of a two storey roof extension including private roof terraces, in connection with the change of use of the building from office (Class B1) and retail (Class A1) to provide 18 affordable housing units (Class C3) at upper floor levels with retained retail use at ground floor level* was granted on 27 November 2018 from Camden Council (Reference 2017/0618/P).



Diagrams 1 and 2 showing 3D views of two stages

4.2 Planning condition 27 requires the following pre-commencement detail (summary)

'Details of feasibility and method statement for the protection during construction and retention of the 4 existing street trees (T1, 2, 3 and 4) on New Oxford Street and Earnshaw Street shall be submitted to and approved by the local authority in writing before any works of construction works which could impact upon them commence. Such details shall follow guidelines and standards set out in BS5837:2012 ''Trees in relation to Construction''. The development shall thereafter not proceed other than in accordance with the approved details.

4.3 This report analyses the impact of the approved development and recommends measures for tree protection to ensure that condition 27 is complied with.

5.0 **Arboricultural method statement**

5.1 Generally

Development can harm trees if not carried out carefully. Tree's crowns and trunks can be damaged by machinery or scorched by fire or chemicals. Trees roots can be asphyxiated and die if the rooting zone becomes compacted and the soil structure damaged. This can happen very easily, particularly on clay soils, even with the passage of light vehicles. Tree roots can be damaged by raising or lowering the ground level. In some cases, it can take several years for the damage to become apparent. This report details how the approved development will take place whilst ensuring that the trees shown for retention can be protected, and for the protection of the soil in the areas for new planting.

5.1.1 *Fires:* Fires on site should be avoided if possible. If unavoidable, they should be situated far enough so that there is no risk of damage to the trees, taking into consideration the wind direction.

5.1.2 *Site and fuel storage, cement mixing and washing points:* All site storage areas, cement mixing and washing points for equipment and vehicles and fuel storage areas should be outside root protection areas unless otherwise agreed with the Local Planning Authority. No discharge of potential contaminants should occur within 10m of a retained tree stem or where there is a risk of run off into Root Protection Areas.

5.1.3 *Temporary buildings for site use:* Site cabins, trailers and other temporary buildings can sometimes be used in root protection area if consent is agreed by the local planning authority. This can be very useful if there is a robust existing hard surfacing in place. The method for installing the buildings, and assessment of whether ground protection is needed is to be agreed with the Arboriculturist and specified prior to installation.

5.1.4 *Protection of tree canopies:* Piling rigs and cranes are often used close to trees. Work must be carefully planned so that there is sufficient room to avoid hitting the canopy during transportation or operation. Arboricultural supervision may be required, however it is the responsibility of the contractor to assess and plan the work. Any access facilitation pruning required is detailed in the tree surgery schedule.

5.2 The following method statements are in chronological order:

5.3 <u>Tree surgery</u>

Recommendations for tree works can be found in the tree surgery schedule in Appendix 3. All works shall be in accordance with BS 3998:2010 Tree work. Recommendations'. The use of a competent tree surgery contractor is necessary to comply with this. The main

contractor and tree surgery contractor must ensure that any necessary consents have been received from the local authority and that no protected species are harmed whilst carrying out site clearance or tree surgery works. Within root protection areas, stumps, shrubs and other vegetation must be removed by hand or using stump grinding machinery to minimize root damage of retained trees. Where poisoning of stumps is specified, this must be carried out by competent operatives. Only chemicals approved for this purpose and used in accordance with the manufacturer's instructions will be used.

The following information must be sought:

- Current employers, public and product liability insurance
- Waste carriers licence
- Qualification and experience of key personnel, including relevant NPTC certificates
- COSHH assessment
- Tool and task based risk assessment, including a Working at Height Risk Assessment
- Site specific risk assessment
- Emergency procedure plan
- Method Statement

A list of suitable tree surgeons is found at: http://www.trees.org.uk/find-a-professional/Directory-of-Tree-Surgeons

Bio security measures are important and found at https://www.forestry.gov.uk/biosecurity

5.4 Tree protection during works

The tree protection fencing is to be erected in the locations shown on the tree protection plan (appendix 2) to a specification found at appendix 3.

5.5 Change of surfacing within the root protection areas of T3 and T4

5.5.1 The area to which this applies is shown by blue cross hatched areas on the tree protection plan *SHA 188 TPP Rev C.* The purpose of the method statement is to ensure that tree roots are retained and that they can function. Therefore, digging down, compacting the soil and creating an impermeable surface will be prevented. The hard surfacing will remain in place during works and lifted at the external works stage. By way of background photos are found overleaf.

The following method statements will be observed:

Photo 1 of T3 and T4 looking west

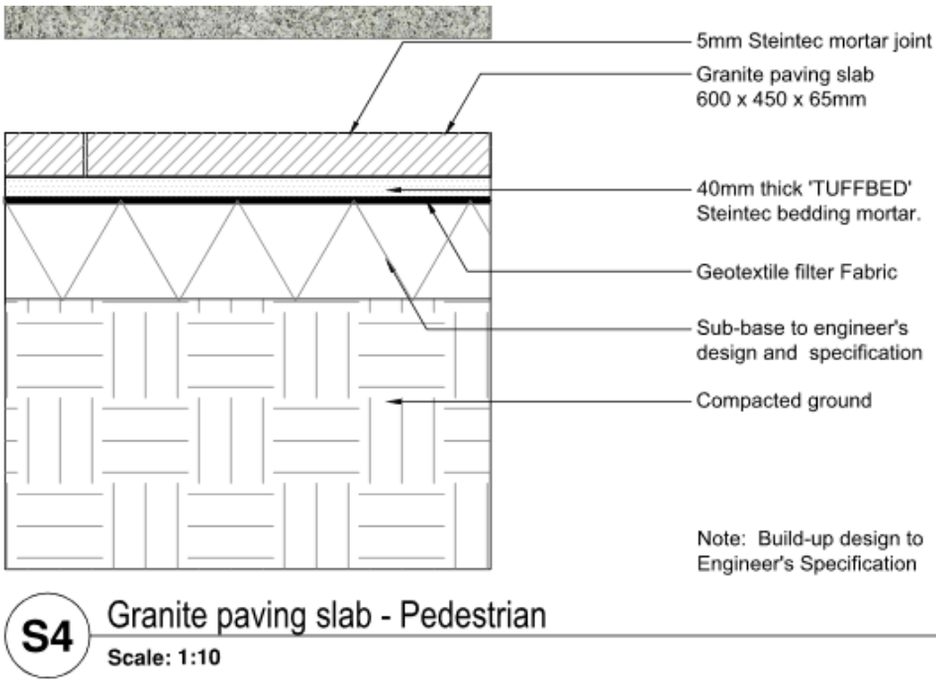
Photo 2 of T3 looking south

5.5.2 Lift the paving slabs in a safe manner. There may be a sheath of fine feeder roots and main structural roots beneath the concrete. Great care must be taken to avoid scuffing and damaging these roots. Once removed, the exposed soil must be immediate covered with a suitable backfill medium such as good quality top soil. This, and the removal of the cycle stands, will be carried out under arboricultural supervision and a tool box talk will be held regarding the replacement surfacing.

5.5.3 Removal of cycle stands. Any roots found with a diameter greater than 25mm growing around the base of the cycle stands will be retained and carefully wrapped in damp hessian. The holes are to be immediately backfilled with a suitable backfill medium to the landscape architect's specification.

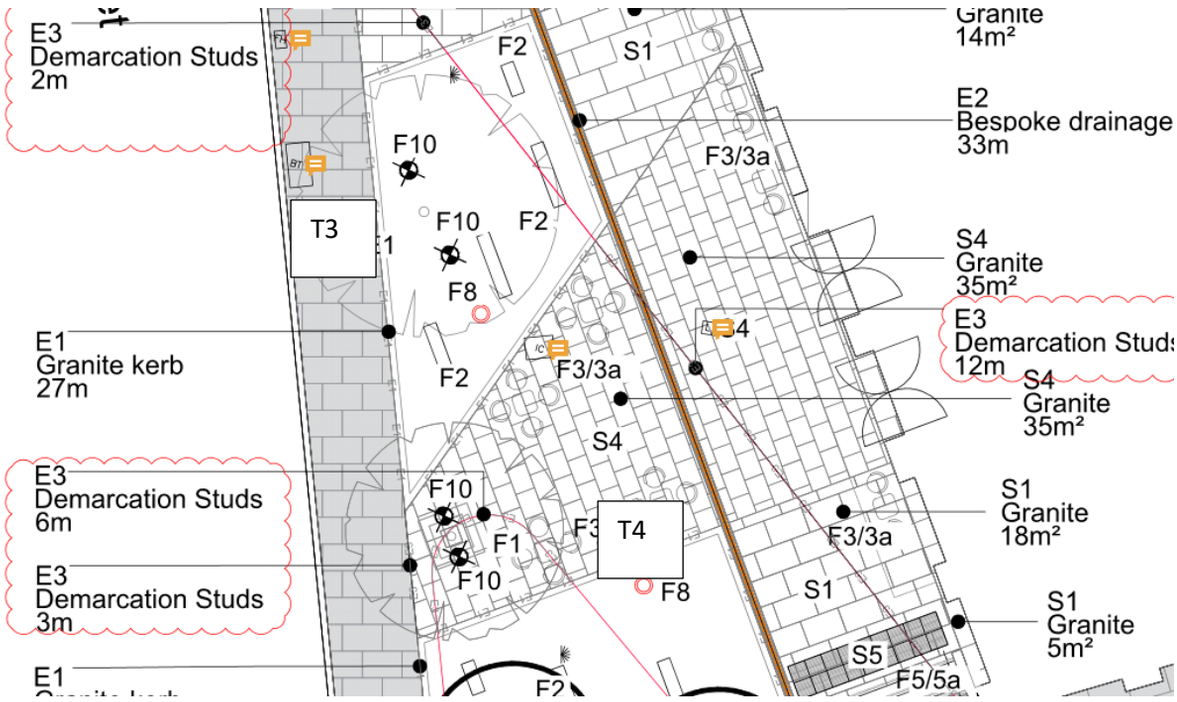
The works should not take place in frosty or hot sunny dry weather as this can harm fine roots.

5.5.4 The new hard surfacing around T4: This will not require any digging down to the base of the existing subbase. This has been clearly communicated and will be included in the Revised Tender Package. Any roots which are growing just below the existing subbase will be entirely unaffected. The hard surfacing around T4 will comprise granite setts 600x 450 x 65mm. The tree will be surrounded by a tree grille to enable room for trunk expansion and resistance to compaction. The area is currently paved and the trees are thriving, therefore there are no new requirements for porousity.



Cross section from 863-DT-401_T01 Ground Floor Paving and Edges (1 of 2)

The plan below shows the location of the new hard surfacing.



Plan 1 Extract from Place Design and Planning reference 863-PL-101_T03. Do not scale – north is vertical.

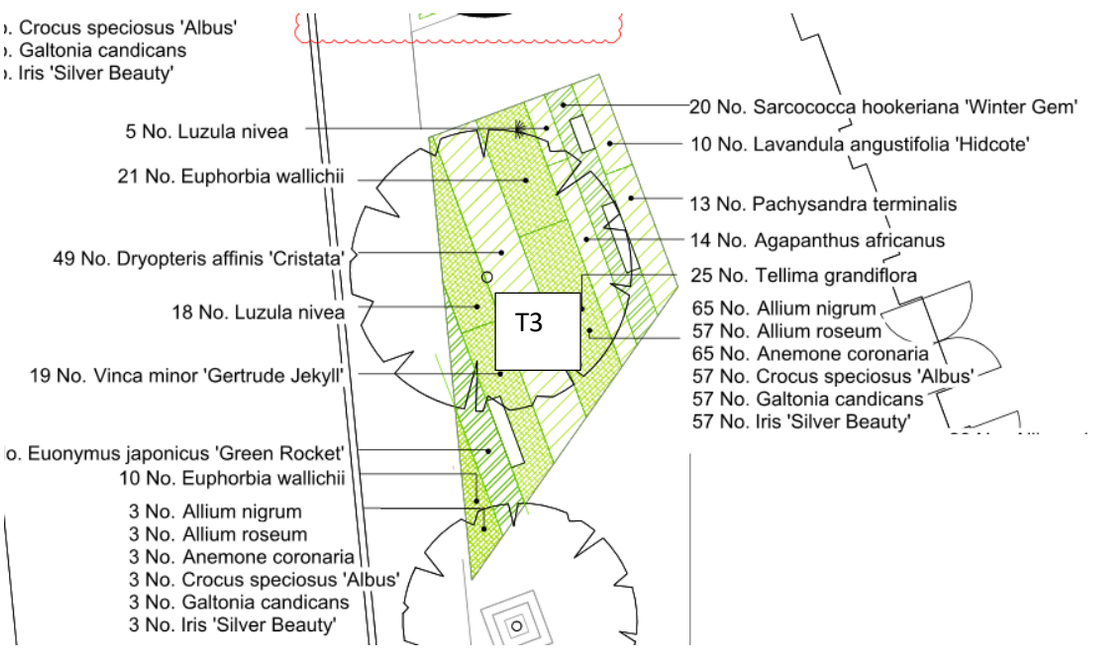
5.5.5 The new soft surfacing around T3: The hard surfacing and subbase will be removed in accordance with 5.5.3 under arboricultural supervision. The Ground Floor Landscape Specification section 164 states all work within the root protection areas is to be carried out by hand as detailed below:

164 Tree roots

1. Protected area: Do not cut roots within precautionary protection area.
   1.1. Size of area: Circle around each tree of radius 12 times trunk diameter, measured 1.5 m above ground level
2. Excavation in protected area
   2.1. Method: By hand
   2.2. Backfill as soon as possible or temporarily line with polyethylene sheet to reduce evaporation.
3. Outside protected area: Give notice of roots exceeding 25 mm and do not cut without approval.
4. Cutting
   4.1. Make clean smooth cuts with no ragged edges.
   4.2. Pare cut surfaces smooth with a sharp knife.
   4.3. Treatment of cut roots: Not required
5. Backfill: As dug material, enriched with amelioration as section Q31

The top soil will be to BS 3882. Section 720A (6) of the Ground Floor Landscape Specification states that within root spread of existing trees 'Do not dig or cultivate'. The plants chosen are all small species of perennials and grasses with pot sizes of 7.5L. The removal of the paving and subbase will provide depth for new soil, and a slight build up of no more than 25mm above the paving (Section 720A) ensures enough depth for the new plants. An area of 300mm around the trunk of the tree will only have soil placed to the depth of the previous paving which should be readily apparent once the paving is removed by different colouration of the bark.

This report recommends the addition of 5% enriched biochar to be mixed in with the top soil to provide multiple benefits to the tree and new planting as further explained at https://www.carbongold.com/what-is-biochar/. The area will be mulched with a loose mulch 75mm deep, but an area of 300mm around the trunk will not be mulched to prevent the base of the tree rotting.



Plan 1 Extract from Place Design and Planning reference 863-PL-201_T03. Do not scale – north is vertical.

6.0 **Arboricultural site supervision**

An initial site meeting:

Before works have started, but after the tree surgery and tree protection measures are in place. At this meeting the site manager, contractor, arboricultural consultant should discuss methodology and the tree protection measures will be examined. A '*What you need to know about working near trees at Castlewood W1A, New Oxford Street, London W1A'* sheet will be issued which includes contact details.

An on site discussion with the tree contractor, scaffolding contractor and arboricultural consultant. The Arboricultural Officer from Camden Council to be invited to this meeting.

During changes to the surfacing and cycle stands near T3 and T4.

After each site supervision, a short report will be sent to the contractor, client and local authority as a record of compliance within 5 days of the visit.

7.0 Conclusions

7.1 This report provides information required for condition 27 of planning consent.

7.2 The pruning work for T1 and T2 will need to be heavy on the southern side, and the trees will be compensatory pruned on the other aspects. This work is not ideall, but as the trees are relatively young in a reasonable form and condition, the trees will regrow, and this is a far better option than removal and replacement. The pruning is essential to the safe operating of the project for scaffolding, welfare cabins and a temporary fire escape.

7.3 There will be an on site discussion with the tree contractor, scaffolding contractor and arboricultural consultant. The Arboricultural Officer from Camden Council to be invited to this meeting. - this has been carried out on 31.01.2020 by Ian Lee, formerly of Sharon Hosegood Associates Ltd which included a meeting with Colleen O'Sullivan, Arboricultural Officer from Camden Council.

7.4 The following works will be subject to site supervision which will be reported to Camden Council Arboricultural Officers within 5 days of inspection –

- The onsite meeting (7.2
- The change in hard surfacing near T3 and T4.

8.0 Recommendations

8.1 That a copy of the report, including the site specific method statements and tree protection plan is kept on site at all times, is part of the site induction, and is sent to the contractor.

8.2 That the arboricultural method statements are observed by all site personnel and supervised at key stages by the project arboricultural consultant. Short supervision reports are to be written after each inspection as a record of compliance and audit trail to the Local Authority.

8.3 That the foundation design takes into account trees to be retained, trees to be removed and trees to be planted.

8.4 That there are no ground level changes with the area shown on the plan by tree protection fencing.

8.5 That the line of the underground services should be ideally located outside of RPAs. However, as a precaution the final service plan should be assessed by an arboriculturalist. If it is unavoidable that services are to be located in RPAs, then a method statement must be produced.

8.6 That no tree works take place until the conditions are discharged.

8.7 That the tree protection fencing is installed before machinery enters the site and remains in place until the soft landscaping stage.

8.8 That the landscaping scheme includes a mix of native trees from a cross section of species to ensure biosecurity against host specific pests and diseases. The trees must be planted and maintained in accordance with 'BS 8545:2014 *Trees: from nursery to independence in the landscape – Recommendations'*.

8.9 That the method statement for changing the surfaces and removing the cycle stands around T3 and T4 is carried out in accordance with the method statement approved by the landscape architect, Camden Council street trees, the contractor and arboricultural consultant, and that this is carried out under arboricultural supervision.

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Director
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Appendix 1

Tree survey sheets

Castlewood, New Oxford St W1A

27.05.16

Tree/Group Number	No. of Trees	Species	Height (m)	Stem diameter	No. of Stems	Spread N (m)	Spread NE	Spread E (m)	Spread SE	Spread S (m)	Spread SW	Spread W (m)	Spread NW	Crown Cleanrance	Life stage	Condition	Recommendations	RPA (m^2)	RPR (m)	Life	BS Category
Tree T1	1	Red Norway Maple Acer platanoides 'Deborah'	10.5	23	1	4.0		4.1		3.5		4.0		6.0	Early Mature	Structural condition Good. Physiological condition Good. Arboricultural work - Historic. Decay / structural defect in crown limb / limbs - Major. Decay / structural defect in crown limb / limbs - Localised. Pruning wounds - Historic. Physical damage / vandalism. This tree is growing in a hard surface tree pit close to the bus stop. The main branch on the road side has been hit by a high vehicle resulting in half the branch being gauged out. As this branch supports long slender branches above, I recommended the branches are reduced to limit the loading. The tree provides softening and is one of only two trees in this part of New Oxford Street. Heavy infestation of Pulvinaria regalis present (a sap sucking insect of low significance).	Reduce faulted limb / limbs by -20%..over the road	23.9	**2.8**	**20-40**	B1/B2
Tree T2	1	Red Norway Maple Acer platanoides 'Deborah'	10.5	20	1	4.0		2.5		3.5		4.5		6.0	Early Mature	Structural condition Good. Physiological condition Good. Arboricultural work - Historic. Decay / structural defect in crown limb / limbs - Major. Decay / structural defect in crown limb / limbs - Localised. Form - Good crown structure. No significant faults observed. This tree is growing in a hard surface tree pit close to the bus stop. The tree provides softening and is one of only two trees in this part of New Oxford Street	No works recommended at time of survey.	18.1	**2.4**	**20-40**	B1/B2

Stem	grey	estimated value
Stem	AVE	average stem diameter for multi-stemmed trees

The survey information in this schedule has been gathered following a BS5837 survey for planning purposes. Where hazardous trees have been noted recommendations for works may have been made but this survey cannot be relied upon as a full health and safety assessment of the trees.

Tree/Group Number	No. of Trees	Species	Height (m)	Stem diameter	No. of Stems	Spread N (m)	Spread NE	Spread E (m)	Spread SE	Spread S (m)	Spread SW	Spread W (m)	Spread NW	Crown Cleanrance	Life stage	Condition	Recommendations	RPA (m^2)	RPR (m)	Life	BS Category
Tree T3	1	Field Maple *Acer campestre*	7.0	19	1	3.6		3.5		3.5		3.5		2.5	Early Mature	Structural condition Good. Physiological condition Good. Dense crown. Deadwood - Minor. Form - Good crown structure. No significant faults observed. This tree is one of two trees growing in the pavement. It is a very good example of its cultivar.	No works recommended at time of survey.	16.3	**2.3**	**20-40**	A1/A2
Tree T4	1	Field Maple *Acer campestre*	8.0	16	1	3.6		3.5		3.5		3.5		2.5	Early Mature	Structural condition Good. Physiological condition Good. Dense crown. Deadwood - Minor. Form - Good crown structure. No significant faults observed. This tree is one of two trees growing in the pavement. It is a very good example of its cultivar. It is slightly sparser than the other field maple.	No works recommended at time of survey.	11.6	**1.9**	**20-40**	B1/B2
Tree T5	1	Grey alder *Alnus incana*	16.5	40	1	4.5		5.0		5.0		4.5		7.0	Late Mature	Structural condition Fair. Physiological condition Fair. Arboricultural work - Historic. Bark exudation. Bark wound - Mechanical. Die-back - Throughout crown. Decline - Suspected. Deadwood - Major. Form - Large sail area / crown extent. Physiological stress. This tree is growing in a metal grille which is lifting due to root pressure. The roots are lifting some of the paving blocks. Old impact wound on northern aspect at 5m. Historically crown lifted.	Deadwood - Remove..	72.4	**4.8**	**10**	C2
Tree T6	1	Italian Alder *Alnus cordata.*	7.0	11	1	2.0		2.5		2.0		2.0		2.0	Semi Mature	Structural condition Good. Physiological condition Good. Form - Good crown structure. No significant faults observed. This tree is growing in a courtyard surrounded by a bench.	No works recommended at time of survey.	5.5	**1.3**	**20-40**	B1

Stem	grey	estimated value
Stem	AVE	average stem diameter for multi-stemmed trees

The survey information in this schedule has been gathered following a BS5837 survey for planning purposes. Where hazardous trees have been noted recommendations for works may have been made but this survey cannot be relied upon as a full health and safety assessment of the trees.

Tree/Group Number	No. of Trees Species	Height (m)	Stem diameter	No. of Stems	Spread N (m)	Spread NE	Spread E (m)	Spread SE	Spread S (m)	Spread SW	Spread W (m)	Spread NW	Crown Cleanrance	Life stage	Condition	Recommendations	RPA (m^2)	RPR (m)	Life	BS Category
Hedge H7	Yew *Taxus bacatta*	0.5	7	1	0.5		0.5		0.5		0.5		0.0	Semi Mature	Structural condition Fair. Physiological condition Fair. Hedgerow - Maintained. Low rectangular hedge. About 10% of the plants are in a poor condition.	*Continue with current management regime*	2.2	**0.8**	**10-20**	C2
Hedge H8	1 Yew *Taxus baccata*	0.5	7	1	0.5		0.5		0.5		0.5		0.0	Semi Mature	Structural condition Fair. Physiological condition Fair. Hedgerow - Maintained. Low rectangular hedge. About 10% of the plants are in a poor condition.	*Continue with current management regime*	2.2	**0.8**	**10-20**	C2

Stem	grey	estimated value
Stem	AVE	average stem diameter for multi-stemmed trees

The survey information in this schedule has been gathered following a BS5837 survey for planning purposes. Where hazardous trees have been noted recommendations for works may have been made but this survey cannot be relied upon as a full health and safety assessment of the trees.

Table 1 of BS5837 (2012) **Cascade chart for tree quality assessment**

Category and definition	Criteria (including subcategories where appropriate)			Identification on plan
Trees unsuitable for retention (see note)				
Category U Those 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	* Trees that have a serious, irremediable, structural defect, such that their early loss is expected due to collapse, including those that will become unviable after removal of other category U 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 health and/or safety of other trees nearby, 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; see 4.5.7*			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	Tree that are particularly good examples of their species, especially if rare or unusual; or those that are essential components of groups or 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 arboricutural and/or landscape features	Trees, groups or woodlands of significant conservation, historical, commemorative or other value (e.g. veteran trees or wood-pasture)	GREEN
Category B **Trees of moderate quality** with an estimated remaining life expectancy of at least 20 years	Trees that might be included in category A, but are downgraded because of impaired condition (e.g. presence of significant though remediable defects, including unsympathetic past management and storm damage), such that they are unlikely to be suitable for retention for beyond 40 years; or trees lacking the special quality necessary to merit the category A designation	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	BLUE
Category C **Trees of low quality** with an estimated remaining life expectancy of at least 10 years, or young trees with a stem diameter below 150 mm	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 collective landscape value; and/or trees offering low or only temporary/transient landscape benefits	Trees with no material conservation or other cultural value	GREY

Explanation of the tree survey sheets

The tree survey has been carried out in accordance with BS 5837:2012 'Trees in relation to design, demolition and construction – Recommendations'. Below is an annotation of the abbreviations in the sheet and their meanings.

1	2	3	4	5	6	7	8				9	10	11	12	13	14	15
Tree Number	Botanical Name (Common name)	Age	Dia (mm)	Stems	Height (crown height)	Ult ht (m)	N	E	S	W	Cond	Life Exp	BS Cat	RPR (m)	RPA (m^2)	Comments	Recommendations

1 Tree

T - Tree, **G** - Group of trees, **H** - Hedge and **S** -shrub mass

2 Species - Botanical name and (Common name)

3 Age

NP – Newly planted, **Y** – Young - an establishing tree that could be easily transplanted

SM - Semi-mature - an established tree still to reach its ultimate height and spread with considerable growth potential.

EM – Early mature – a tree reaching its ultimate height and whose growth is slowing, however it will still increase considerably in stem diameter and crown spread.

M – Mature – a tree with limited potential for further significant increase in size, although likely to have a considerable safe useful life expectancy

OM – Over-mature – a senescent or moribund tree with a limited safe useful life expectancy

V – Veteran – a tree older than typical for the species and of great ecological, cultural or aesthetic value.

4 Dia (mm)

Diameter of the stem in millimetres at 1.5m above ground level for single stemmed tree or in accordance with Annex C of BS 5837 for multi-stemmed trees or trees with low forks or irregular stems.

5 Stems

Number or stems. Multi-stemmed is m/s

6 Height (Crown height)

Height in metres from the ground to the top of the crown

(Crown height) – height of canopy above ground level

7 Ult ht (m)

Height in metres that could be reasonably expected for the species given its condition, past management and location.

8 NSEW

The crown spread from the trunk to the tips of the crown at the four cardinal points

9 Cond

Physiological condition. Good, fair, poor or dead

10 Life Exp

Estimated remaining contribution in years; <10, 10+, 20+ and 40+.

11 BS Cat

Category in accordance with Table 1 and section 4.5 of BS

U – unsuitable for retention. Existing condition is such that they cannot be realistically retained as living trees in the context of the current land use for longer than 10 years. Note, category U trees can have existing or potential conservation value which might be desirable to preserve.

A – high quality and value (non-fiscal) with at least 40 years remaining life expectancy

B – moderate quality and value with at least 40 years remaining life expectancy

C – low quality and value with at least 10 years remaining life expectancy, or young trees with a stem diameter below 150mm

A, B and C category trees are additionally graded into: 1 – mainly arboricultural values, 2 – mainly landscape values and 3 – mainly cultural values including conservation

12 RPR (m)

RPR – Root protection area radius (m)

13 RPA – Root protection area (m^2)

14 Comments

Detailed comments about the tree

15 Preliminary recommendations

Recommendations based on the tree's conditions and its current surroundings.

Appendix 2

Tree protection plan SHA 188 TPP Rev C

NEW OXFORD STREET

DYOTT STREET

BUCKNALL STREET

EARNSHAW STREET

T1 - B

T2 - B

Scaffold bridged at 1st floor to provide access around the bus stop waiting area. Scaffold will be up to the 7th floor.

Fire escape rerouted via a scaffold platform and haki stairs

Pedestrian tunnel below facade retention system. Minimum 12m width. Welfare cabins above.

FM Services

H8 - C

H7 - C

T6 - B

A1 Retail
Unit 06
135 Sq. m
FFL +25.4

T5 - C

A3 Retail
Unit 05
77 Sq. m
FFL +25.55

T3 - A

T4 - B

T1 - A Category A - high quality and value

T1 - B Category B - moderate quality and value

T1 - C Category C - low quality and value

T1 - U Category U - unsuitable for retention

Crown spread of trees to be retained

Crown spread of trees following pruning

RPA - root protection area as defined by Table 2 BS 5837:2012

Low hedges to be removed

Trees to be removed

Shrubs to be removed

Site hoarding fixed to existing wall for T3 and T4 and above ground structures for T1 and T2. Note, hoarding only shown on this plan where near trees.

Method statement for change in surfaces

Triple layer of hessian wrapped around the trunks of T2 for duration of works, and for T3 and T4 for external works only.

Notes

1. Contractors to check all dimensions on site
2. Discrepancies must be reported to the Arboricultural Consultant before proceeding
3. The original of this drawing was produced in colour, a monochrome copy should not be relied upon.
4. It is the responsibility of the contractor to ensure necessary consents for tree works are in place
5. This drawing is copyright © Sharon Hosegood Associates Ltd

Rev :C	Description : External works details added	Authorized : SMD-H 20.10.21
Rev :B	Description : Construction details added	Authorized : SMD-H 31.12.19
Rev :A	Description : New Layout Received 09.01.16	Authorized : SMH

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Client

Royal London Mutual Insurance Society

Site Address

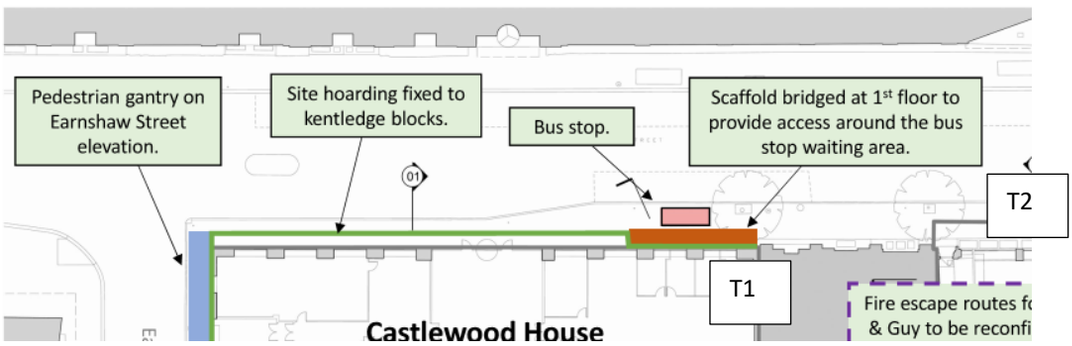
Castlewood W1A

Drawing Title	Orientation	Drawn	Authorized
Tree Protection Plan		SMD-H	SMD-H
Date	**Drawing Number**	**Scale**	**Drawing Status**
19.07.16	SHA 188 TPP Rev B	1:200@A2	For Issue
Revision			
C			

Appendix 3

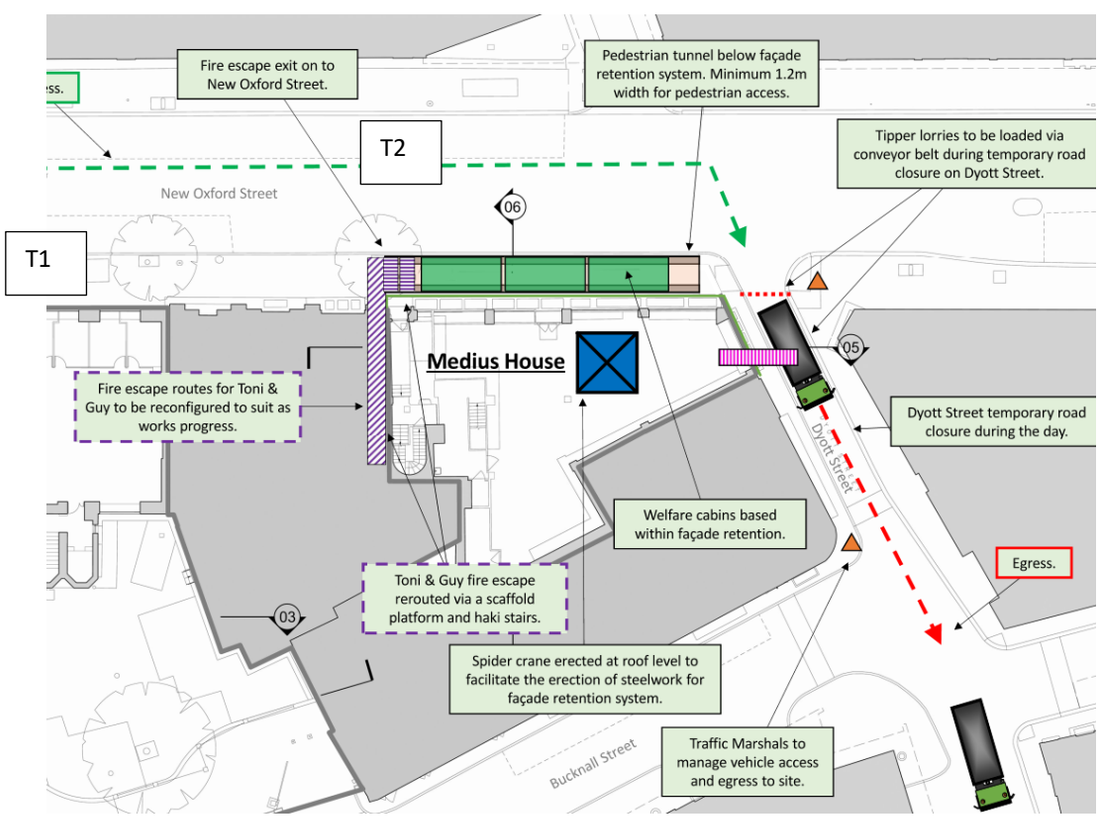
Tree protection specification

The tree protection for T1 will be set back site hoarding with scaffold bridged at 1st floor to provide access around the bus stop waiting area.



Plan 2 – extract from Appendix 20.a Castlewood Logistics Plan. Do not scale. North is vertical

T2 will have a pedestrian tunnel with cabins above, and a fire exit. The trunk will be temporarily triple wrapped in hessian to prevent any accidental scuffing.



Plan 3 – extract from Appendix 20.b Medius House logistics plan

Do not scale. North is vertical.

Plan 4 – extract from Appendix 21.a Medius House logistics plan

The trees T3 and T4 will be protected by the site hoarding during demolition and construction. The site hoarding will be installed by fixing to the existing wall, therefore there will be no impact on tree roots..

Plan 5 – extract from Appendix 23.b showing the hoarding secured along existing wall

During the external works phase, the trunks of T3 and T4 will be triple wrapped in hessian up to the crown break (approximately 2m) and tied with string

Appendix 4

Tree Surgery Schedule

Tree surgery schedule

All works to be carried out in accordance with BS 3998:2010 'Tree works – Recommendations'. All pruning cuts to be made at suitable growing points in the line with the principles of 'Natural target pruning' to the branch collar.

Tree no.	Species	Proposed works	Reason
T1	Norway maple	Prune back hard on the southern side and carry out compensatory pruning on the other aspects. Exact amount to be agreed at a site meeting with the tree contractor, scaffolding contractor, arboricultural consultant and Arboricultural Officer from Camden Council	To facilitate construction
T2	Norway maple	Prune back hard on the southern side and carry out compensatory pruning on the other aspects. Exact amount to be agreed at a site meeting with the tree contractor, scaffolding contractor, arboricultural consultant and Arboricultural Officer from Camden Council	To facilitate construction
T3	Field maple	Light crown reduction to clear the boundary (up to 1m)	Facilitation access pruning for site hoarding
T4	Field maple	Light trimming to clear the boundary (up to 0.5m)	Facilitation access pruning for site hoarding
T5	Grey alder	Fell to ground level and grind stump	To facilitate development
T6	Italian alder	Fell to ground level and remove stump	To facilitate development
	Low yew hedges and shrubs	Remove	To facilitate development

The ecologists report must be referred to before commencing works.

All pre-commencement conditions must be cleared before commencing works.

Appendix 5

Statement of methodology and reference material

Statement of methodology

Review of architects plans

Survey carried out on 26 May 2016 by Sharon Hosegood (now Durdant-Hollamby)

Tree survey using Visual Tree Assessment carried out in accordance with BS 5837:2012 '*Trees in relation to design, demolition and construction – Recommendations'* (BS). All investigations were from ground level only and binoculars were used when necessary. All trees with a trunk diameter of 75mm or above were surveyed. Obvious hedges and shrub masses were identified where appropriate. Information collected is in accordance with recommendations in subsection 4.4.2.5 of BS and include species, height, diameter, branch spread, crown clearance, age class, physiological condition, structural condition and remaining contribution. Each tree was then allocated one of four categories (U, A, B or C).

Received material

12. Method Statement (2), 190426 Castlewood and Medius House Project Directory, Appendix 26.a Scaffold and Logistics Plans Rev2, utilities survey, CMP Version 5 141119
October 2021 – full tender package by Place Design and Planning incorporating all landscaping details

Reviewed documents and text

BSI. BS 3998:2010 *Tree work-Recommendations.*

BSI. BS 5837:2012 *Trees in relation to design, demolition and construction – Recommendations*

C. Mattheck 'The body language of trees' 2015

Appendix 6

Caveats & Exclusions

Specific report caveats

1. At the time of writing this report, the protected tree status is correct, however, this can change. Therefore I advise that a further check is made with Camden Council before any works to trees takes place.
2. No internal diagnostic equipment was used other than a sounding mallet and probe and all inspections where from ground level only, with the aid of binoculars where necessary.
3. The survey is concerned solely with arboricultural issues.
4. Any changes in ground level, or excavations near to tree roots not discussed within this report may change the stability and condition of the trees and a further examination would be required.
5. As trees are a dynamic living organism this report is only valid for a period of 12 months, in respect to their health and condition.
6. Only the trees listed in this report have been examined.
7. The measure of offsite trees have been estimated, except any crown within the site overhang which is measured. Where the crown of an onsite tree overhangs the boundary, the crown spread in this direction is also estimated.
8. The base and trunk of the offsite trees could not be examined, and therefore a full assessment of the trees condition could not be made.
9. Dense ivy and undergrowth prevent a full condition survey being carried out. The vegetation may be hiding structural defects.
10. The tree information is from the time of the survey. Some pests, diseases and fungi only appear seasonally, therefore it is possible not all issues that may affect the health of the trees could be observed.

Appendix 7

Tree related legislation affecting the site

Tree preservation orders

The Town and Country Planning (Tree Preservation) (England) Regulations 2012.
No tree preservation orders affect the site.

Conservation Area:

Castlewood House sits between two conservation areas: the Bloomsbury Conservation Area and the Denmark Street Conservation Area. The only tree which falls within the conservation area is one of the street trees, T2. The four street trees (T1, T2, T3 and T4) are managed by Camden Council and any works to these trees must be carried out by their approved contractors.

Ecological considerations

The Wildlife and Countryside Act 1981, as amended, The Conservation of Habitats and Species Regulations 2010 and the Countryside and Rights of Way Act 2000, provide statutory protection to species of flora and fauna including birds, bats and other species that are associated with trees.

Occupiers Liability Act 1957 and 1984

The Occupiers Liability Act (1957 and 1984) places a duty of care to ensure that no reasonably foreseeable harm takes place due to tree defects. Therefore this report includes recommendations within the tree tables for work required for safety reasons. 'Common sense risk management of tree (National Tree Safety Group 2012)' states that *'The owner of the land on which a tree stands, together with any party who has control over the tree's management, owes a duty of care at Common Law to all people who might be injured by the tree. The duty of care is to take reasonable care to avoid acts or omissions that cause a reasonably foreseeable risk of injury to persons or property'.*

Common law enables pruning back to the boundary line providing the work is reasonable.
The owner of a tree is not obliged to trim their trees or hedges to prevent them from crossing over a boundary. Whilst the tree owner is not obliged to cut back the branches, the person whose property is overhung has the right to cut back the branches to the boundary providing there are no planning or legal restrictions on the trees such as Tree Protection Orders or if they are located in a church yard, in which case suitable consent must be obtained. Such pruning works must be undertaken to a suitable standard and must not cause damage to the tree.

Appendix 8

Glossary

Access facilitation pruning	One-off tree pruning operation, the nature and effects of which are without significant adverse impact on tree physiology or amenity value, which is directly necessary for operations on site.
Arboriculture	Formerly all aspects of the culture of trees, especially for forestry. Latterly, the art and science of cultivating and managing trees as groups and individuals, primarily for amenity and other non-forestry purpose.
Arboricultural method statement	Methodology for the implementation of any aspect of development that is within the root protection area, or has the potential to result in loss of or damage to a tree to be retained.
Arboriculturist	Person who has, through relevant education, training and experience in the field of trees in relation to construction.
Architecture	In a tree, a term describing the pattern of branching of the crown or root system.
Backfill medium	Material used for refilling an excavated planting hole.
Bark	A term usually applied to all the tissues of a woody plant lying outside the vascular cambium, thus including the phloem, cortex and periderm.
Biodiversity	The variability among all living organisms of an ecological complex.
Biomechanical	Pertaining to the mechanical functions and properties of living organisms, such as trees.
Body language	In trees, the outward display of growth responses and/or deformation in response to mechanical stresses.
Branch	A limb extending from the main stem or parent branch of a tree.
Branch bark ridge	The raised arc of bark tissues that forms the acute angle between a branch and its parent stem
Branch collar	The swelling or roughened bark often found at the base of a branch which should be left intact if the branch is to be pruned off.
Buttress zone (root flare)	The basal part of a tree, where the major lateral roots join the stem with buttress-like formations on the upper sides of the junctions.
Canker	A lesion in which bark and cambium have been killed, sometimes exposing the wood and often showing a swollen appearance owing to the encircling growth of new tissues.
Canopy	The topmost layer of twigs and foliage in a tree.
Co-dominant	In trees, a similarity between two or more stems or branches with regard to their size and their position within the canopy.
Column	In the wood or phloem of a tree, an axially elongated zone of tissue that is distinguished form the surrounding tissue; e.g. Live verses dead or decayed versus non-decayed.
Construction exclusion zone	An area based on the root protection area from which access is prohibited for the duration of the project.
Containerised tree	Tree grow using containerizing nursery production system.
Compartmentalise	The confinement of disease or other dysfunction within an anatomically discrete region of plant tissue, due to passive and/or active defenses operating at the boundaries of the affected region.
Crown	In arboriculture, the main foliage-bearing portion of a tree.

Crown lifting	The removal of shortening of the branches that form the lower part of the crown of a tree.
Crown reduction	Pruning in order to reduce the size of the crown of a tree.
Crown thinning	Pruning inside the crown of a tree in order to reduce its density.
Defect	In relation to tree hazards, any feature of a tree which detracts from the uniform distribution of mechanical stress, or which makes the tree mechanically unsuited to its environment.
Dessication	The state of extreme dryness, the drying out of roots.
Dieback	The death of part of a plant, usually starting from a distal point and often progressing proximally in stages.
Direct damage	Direct physical damage to a structure of surface from pressure exerted by the trunk or growing roots.
Ecosystem services	The benefits that a particular species or range of species bestow upon others (including humans) though ecological relationships. Such services can sometimes be estimated in a form that allows them to be included in financial accounting.
Epicormic	Pertaining to shoots or roots which are initiated on mature woody stems; shoots can form tin this way from dormant buds or they can be adventitious.
Failure	In connection with tree hazards, a partial or total fracture within woody tissues or loss of cohesion between roots and soil.
Flush cut	A pruning cut close to the parent stem which removes part of the branch bark ridge.
Foreseeable	In hazard assessment, pertaining to failure and associated injury of damage which are predictable on the basis of evidence from a tree and its surroundings.
Fungi	Organisms of several evolutionary origins, most of which are multicellular and grow as branched filamentous cells within dead organic matter or living organisms.
Hazard	A thing, a process or a potential event that has the potential to cause harm.
Heartwood	The dead or predominantly dead central wood of various tree species whose outer living wood, sapwood, has a finite and pre-determined lifespan.
Included bark	Bark of adjacent parts of a tree (usually forked stems, acutely joined branches or basal flutes) which is in face-to-face contact; i.e. without a woody connection. Such a structure lacks inherent strength but is in many instances strongly reinforced by a surrounding 'shell' of wood.
Independent in the landscape	Point at which a newly planted tree is no longer reliant on excessive or abnormal management intervention in order to grow and flourish with realistic prospects of achieving its full potential contribute to the landscape.
Level arm	A mechanical term denoting the length of the lever represented by a structure that is free to move at one end, such as a tree or an individual branch.
Landscape character	A distinct, recognisably and consistent pattern of elements in the landscape that make one landscape different from another, rather than better or worse.

Mulch	Material laid down over the rooting area of a tree or other plant to help conserve moisture, suppress weeds and encourage a beneficial microflora.
Probability	A statistical measure of the chance that a particular event (e.g. a specific failure of a tree or specific kind of harm to persons or property) might occur.
Retrenchment	Progressive reduction in the size of the crown of an old tree, by means of the dieback of breakage of twigs and small branches, accompanied by the enhanced development of the lower or inner parts of the crown.
Risks	The likelihood of the potential harm from a particular hazard becoming actual harm.
Root protection area	A layout 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. BS 5837:2012 *'Trees in relation to design, demolition and construction – Recommendations'.*
Root flare	Thickened and expanded base of s tree stem at ground level form which buttress roots form.
Rootplate	The central part of the root system of a tree, consisting of the large-diameter main roots and a dense mass of smaller roots and soil.
Service	In construction, any above-or below-ground structure o apparatus for utility provision.
SULE	Safe useful life expectancy of a tree (Barrell)
Stress	In plant physiology, a condition under which one or more physiological functions are not operation within their optimum range, for example owing to lack of water, inadequate nutrition or extremes of temperature.
Stub cut	A pruning cut which is made at some length distal to the branch bark ridge.
Target pruning	The pruning of a twig or branch so that tissues recognisably belonging to the parent stem or branch are retained and not damaged.
Tree Preservation Order	In Great Britain, an order made by a local authority, whereby the authority's consent is generally required for the cutting down, topping or lopping of specified trees.
Tree protection plan	Scale drawing, informed by descriptive text where necessary, based upon the finalized proposal, showing trees for retention and illustrating the tree and landscape protection measures.
Utility	An undertaker by statute that has a legal right to provide customer services (e.g. communication, electricity, gas and water).
Vigour	In tree assessment, an overall measure of the rate of shoot production, shoot extension or diameter growth.
Vitality	In tree assessment, an overall appraisal of physiological and biomechanical processes, in which high vitality equates with near-optimal function, in which high vitality equates with healthy function.
Visual Tree Assessment (VTA)	In addition to the literal meaning, a system expounded by Matteck and Breloer (1995) to aid the diagnosis of potential defects through visual signs and the application of mechanical criteria.

Appendix 9

My Experience and Qualifications

Sharon Durdant-Hollamby

FICFor FArbor A BSc (Hons) Tech Cert Arbor A

Profile

Sharon is an Expert Witness, chartered arboriculturist and Director of Sharon Hosegood Associates Ltd. Sharon had eleven years' experience as a local government tree and landscape officer before joining DF Clark Contractors as a tree consultant in 2005. In 2007 she formed an environmental practice in Essex with the owner. As managing director, she built up the ecological and arboricultural consultancy to a team of 20. She is a regular presenter and an occasional trainer for Trevor Roberts Associates. She appeared on BBC1 in July 2015 and September 2015, in 'Britain Beneath Your Feet' demonstrating tree radar at the Burghley Country Park, Lincs, with Dallas Campbell, the consumer programme 'Rip Off Britain', and latterly, again with tree radar equipment, Springwatch, investigating the rooting of the Major Oak at Sherwood Forest in June 2018. Sharon was the technical coordinator and chair of the Institute of Chartered Foresters national study tour 2016 'The streets of London'. In November 2018 Sharon presented at the Annual International Arboricultural Summit in Hong Kong and is now on the Board of Advisors. She became President of the Institute of Chartered Foresters in 2021

Specialities:	Trees in relation to development, including appeals and planning hearings Tree root investigations, including TreeRadar Tree hazard evaluation Tree preservation orders Trees and well-being with community engagement
Professional bodies:	Fellow, and President, of the Institute of Chartered Foresters (ICF) Fellow of the Arboricultural Association
Qualifications:	Cardiff University Law School Bond Solon Civil Expert Certificate Arboricultural Associations Technicians Certificate BSc (Hons) Geography and Landscape Studies Managing Safely IOSH (2017)
Awards:	Top student award for the Technician's certificate in 2005 The Broomfield Hospital Woodland Management project she has managed since 2009 has won the following awards: The Essex Biodiversity Awards (nomination) The Excellent Community Engagement Award (NHS Forest) Green Flag and Green Apple Award Highly commended for the Health Sector Journal Award 2013

Sharon Hosegood
ASSOCIATES

ARBORICULTURAL METHOD STATEMENT REPORT

BS 5837:2012 '*Trees in relation to design, demolition, and construction' - recommendations*

PURSUANT TO DISCHARGE CONDITION 27

SITE:

Castlewood W1A, New Oxford Street, London W1A

CLIENT:

Royal London UK Real Estate Fund

Sharon Durdant-Hollamby
FICFor FArborA BSc (Hons) Tech Cert (ArborA)

DATE: 31 December 2019 Rev A October 2021
OUR REF: SHA 188 Rev A

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