WHARTON
Natural
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Consultants

Arboricultural Impact Assessment

SITE LOCATION
264 Sheen Lane
East Sheen
London

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OUR REFERENCE
210519 0880 AIA V1a

PREPARED FOR
William Smalley
The Dairy
40 Emerald St
London
WC1N 3QH

Quality Assurance

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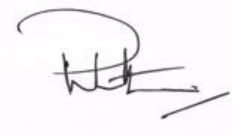
Date	18th March 2019	19th May 2021
Prepared by	Sebastian Onslow	Elva Preston
Qualifications	*FdSc Arb. MArborA. MICFor (Chartered Arboriculturist)*	*BSc (Hons), Dip Arb L4 (ABC), TechArborA, AMIEnvSc*
Signature		
Checked by	Peter Wharton	James Butler-White
Qualifications	*BSc(Hons) FArborA MICFor (Chartered Arboriculturist)*	*FdSc Arb. MArborA*
Signature		
Authorised by	Peter Wharton	Peter Wharton
Position	Director	Director
Signature		
Client number	0880	0880

Executive Summary

This Arboricultural Impact Assessment (AIA) has been commissioned by William Smalley on behalf of their client Mrs Mckittrick. It is prepared in relation to the proposed development at 264 Sheen Lane, East Sheen, London ('the Site') (see aerial photography at appendix 1).

Proposed Development Scheme

The proposed development is for the erection of a single storey new build extension to the west/north-west of the existing house, 1 new outbuilding (in addition to the existing garage) and landscape enhancements at 264 Sheen Lane, East Sheen, London.

Results of Survey

A total of 30no. individual trees, 4no. groups of trees and 2no. hedgerows have been assessed. These include 2no. A category, 13no. B category, 20no. C category and 1no. U category. All trees at the Site and within influencing distance have been assessed.

Conclusions

In order to implement the proposed development, there will be an overall loss of 8no. individual trees and 2no. hedgerows. These comprise of 1no. B category, 8no. C category and 1no. U category. To ensure continuity of canopy cover and fulfil the requirements of The Council's Local Plan (Policy PL 16), there is a significant commitment to mitigation tree planting which is detailed within the Tree Planting Scheme (Reference: 190319 0880 TPS V1). This includes 9no. new trees planted at select standard size (12-14cm stem girth 2.5-3.5m height).

In order to construct the proposed extension, there will be a new incursion within the Root Protection Area (RPA) of T21 (Lawson cypress). The incursion will total 3m^2 of the total 72m^2 RPA, therefore a 4% new incursion. Due to the minimal RPA incursion, it is considered likely that any identified roots will be <25mm diameter and can be pruned back with sharp bypass secateurs (ideally to a growth point). Based on the minimal proposed incursions, a traditional trench filled foundation type for the northern elevation of the extension will not be altered on this occasion.

The proposal includes the construction of a new boundary wall along the north and eastern site boundaries. This will require working within the RPAs of boundary trees including T5, T6, T7, T8, T9, T10, T11, T12, T13, G15, G17, T21, T35 and T36. To avoid further damage through construction, the foundations for the new wall will follow the existing fence line which sits on a brick foundation. Where large surface roots prevent new wall foundation being constructed, there will be a requirement to construct the new wall foundations on an engineered design pile or lintel.

Recommendations

The removal of existing hard surfacing, foundations and built up ground in RPAs must be undertaken with hand tools only and/or under the direct supervision/guidance of the Arboricultural Clerk of Works (ACoW).

The successful retention of those trees that will remain on the Site will be dependent upon the quality and maintenance of any protection system that is put in place. An Arboricultural Method Statement should be provided to detail how the necessary tree protection will be implemented.

An indicative draft tree protection plan (DWG 004 Rev A – Appendix 4) has been provided, however, this is subject to alteration following a final decision notice and a detailed method statement should be provided as part of a robust planning condition.

It is critical that all protective fencing is installed and erected and the CEZ enforced prior to the commencement of any works on-site. Following installation of tree protection, a site meeting will be

undertaken with the Tree Officer to ensure satisfaction of all parties prior to any on-site works commencing.

It is recommended that a suitable competent arboriculturist, undertakes the site supervision and monitoring works.

In order for tree and root protection measures to work effectively all personnel associated with the construction process must be familiar with the Tree Protection Plan.

It is recommended that planning conditions be adhered to any approval for a suitable tree planting scheme and for the production of an Arboricultural Method Statement for implementation of tree protection, pre-commencement meetings and on-going site supervision.

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1. Introduction

1.1 Terms of instruction

1.1.1 The Principal Author of this report is Elva Preston *BSc(Hons), Dip Arb L4 (ABC), AMIEnvSc, TechArborA* Arboricultural Consultant at Wharton Natural Infrastructure Consultants Ltd. (known here in as 'Wharton').

1.1.2 Elva has over three years of professional experience in arboricultural consultancy and has worked on projects ranging from large master planning proposals to commercial and residential sites throughout the UK. Elva is a Professional Member of the Arboricultural Association (AA) and Institute of Environmental Science (IES) and is therefore required to uphold the professional and ethical standards within their Code of Conducts.

1.1.3 This Arboricultural Impact Assessment (AIA) has been commissioned by William Smalley on behalf of their client Mrs Mckittrick. It is prepared in relation to the proposed development at 264 Sheen Lane, East Sheen, London ('the Site') (see aerial photography at appendix 1).

1.1.4 The instruction is to fulfil the initial requirements of London Borough of Richmond Upon Thames Council ('the Council'), who require an AIA to make an informed decision on our client's full planning application.

1.1.5 The document is also intended as a reference point for all site operatives and a copy will remain with the site manager for the duration of the development. This document may be used as a point of reference if there were to be a dispute over compliance with related planning decisions. However, should the Council be minded to grant planning permission, an Arboricultural Method statement should be conditioned to ensure sufficient protection of retained trees.

1.2 Scope of project

1.2.1 The scope of this project is threefold:

i. Undertake a survey of trees on the Site and within influencing distance of the Site to fulfil the requirements of BS5837:2012 *Trees in Relation to Design, Demolition and Construction: Recommendations*.

ii. Provide a Tree Constraints Plan for the Site including Root Protection Areas, canopy spreads and shading arcs if necessary (orientation dependant).

iii. Provide an AIA in relation to the proposed development scheme, giving assessment of the trees in relation to the proposal and the potential impacts the trees will have.

1.3 Reference documents

1.3.1 As background information, the following documentation has been referenced.

Table 1 Document and Plans Provided

Document Description	Reference No.	Prepared By	Date
Topographical survey	8505-SITE	M. J. Zara Associates	October 2017
Proposed site plan	0084_210513_RF pln	William Smalley RIBA	May 2021
Proposed landscape plan	APG(9-)A11	Raw Architecture Workshop	September 2018

2. Proposed Development Scheme

The proposed development is for the erection of a single storey new build extension to the west/north-west of the existing house, 1 new outbuilding (in addition to the existing garage) and landscape enhancements at 264 Sheen Lane, East Sheen, London.

3. Planning Policy and Legislation

3.1 National Planning Policy Framework (NPPF) (February 2019)

3.1.1 When determining planning applications, Local Planning Authority's (LPA) should apply the following principles:

- *If significant harm to biodiversity resulting from a development cannot be avoided (through locating on an alternate site with less harmful impacts), adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused.*
- *Development resulting in the loss or deterioration of irreplaceable habitats (such as ancient woodland and ancient or veteran trees) should be refused, unless there are wholly exceptional reasons and a suitable compensation strategy exists.*
- *Development whose primary objective is to conserve or enhance biodiversity should be supported; while opportunities to incorporate biodiversity improvements in and around developments should be encouraged, especially where this can secure measurable net gains for biodiversity (paragraph 175).*

3.1.2 The trees proposed for removal within this report is neither considered aged or veteran and therefore the principles for refusal within the NPPF would not be considered applicable.

3.2 Local Planning Policy

3.2.1 London Borough of Richmond Upon Thames Local Plan (July 2018) Policy PL 16 Trees, Woodlands and Landscape has been considered for this planning application. This Policy details the protection of existing trees and the provision of new trees that complement existing, or create new, high quality green area, which deliver amenity and biodiversity benefits. The Policy is set out to ensure development protects, respects, contributes to and enhances trees and landscapes.

3.3 Tree Preservation Orders and Conservation Areas

3.3.1 The LPA has been contacted to establish whether any trees contained within the survey are protected by either a Tree Preservation Order (TPO) or are within a Conservation Area.

3.3.2 It has been confirmed by the Council on 18th March 2019 that none of the trees on site are protected by a TPO. However, there are several TPO'd trees off-site beyond the northern boundary within ownership of No.262 Sheen Lane. The Site is further positioned within Conservation Area No.13 Christ Church, East Sheen.

3.4 Relevant wildlife legislation

3.4.1 The Wildlife and Countryside Act 1981 (as amended) and the Conservation of Species and Habitat Regulations 2017 (as amended) provide statutory protection of birds, bats and other species that can inhabit trees. The Natural Environment and Rural Communities Act 2006 (Section 41 England and Section 42 Wales) also places a duty on Local Planning Authorities to consider biodiversity when carrying out their duties. The Conservation of Habitats and Species Regulations 2017 specifically provides safeguards for European Protected Sites and Species (as listed in the Habitats Directive). This has recently been amended by the Conservation of Habitats and Species Regulations (Amendment) (EU Exit) Regulations 2019 which continue the same provision for

European protected species, licensing requirements, and protected areas now that the UK has left the European Union.

3.4.2 Great care is required to avoid an offence under the above legislation, and consideration should be given to the potential presence of protected species within a tree subject to future works. Where the presence of protected species is suspected, the project ecologist or Natural England should be contacted for advice before works proceed.

3.5 Felling Licence

3.5.1 Tree felling is also restricted under the Forestry Act 1967. Under this act, there is an exemption from the need for a felling licence for "*Felling trees immediately required for the purpose of carrying out development authorised by planning permission (granted under the Town and Country Planning Act 1990) …"*

3.5.2 If full planning permission is granted, then any trees which require felling to implement the approved plans are exempt from this statutory protection. Outline planning permission does not provide an exemption to the regulations that control tree felling in the Forestry Act 1967.

4. Site Assessment

4.1 Site visit

4.1.1 The tree assessment was undertaken on 26th February 2019 by Sebastian Onslow *FdSc Arb, MArborA, MICFor (Chartered Arboriculturist)* and the trees inspected from ground level. The owners/managers of the Site were informed of our presence on-site and prior to undertaking the inspection of trees.

4.2 Site description

4.2.1 The Site is located within East Sheen, a suburb of southwest London in the London Borough of Richmond upon Thames. The Site comprises of a detached residential property with associated garage and outbuilding. Mature gardens frame the house with the main formal lawn extending south of the property. Neighbouring residential properties border the Site to the north, east and west. Sheen Gate entrance to Richmond Park is positioned south of the Site beyond Fife Road. Access to the Site is from the east directly from the B351 Sheen Lane.

5. Arboricultural Assessment

5.1 Method of data collection

5.1.1 The trees on the Site were originally surveyed without reference to the site layout as detailed in Clause 4.4.1.1 of BS5837:2012. However, for the purposes of this arboricultural assessment, the design proposal for the Site has been considered.

5.1.2 The survey recorded trees either as individual specimens or as groups, where these trees were aerodynamically, culturally or visually important as groups. The tree numbers associated with each tree are cross-referenced within the schedule and plans at Appendix 3 and 4 respectively. The complete method of data collection for the tree survey is provided at Appendix 2.

5.2 Summary of data

5.2.1 A total of 30no. individual trees, 4no. groups of trees and 2no. hedgerows have been assessed. These include 2no. A category, 13no. B category, 20no. C category and 1no. U category. All trees at the Site and within influencing distance have been assessed.

5.2.2 T1 (copper beech) is a mature specimen positioned towards the southwest corner of the Site. This A category tree has a well-balanced canopy and provides high amenity value to the Site and

wider landscape.

5.2.3 T36 (pedunculate oak) is a mature tree located off-site beyond the eastern boundary. The A category street tree is a large prominent feature with high public amenity value and wide spreading canopy.

5.2.4 A total of 13no. individual B category trees have been recorded. These comprise of a mix of species including Japanese maple, common beech, Atlas cedar, Bhutan pine, strawberry tree, and pedunculate oak. Trees T5, T6, T7, T8 and T9 (common beech) form a line of B category specimens positioned close to the eastern boundary. These beech trees provide important site screening value and wider amenity and landscape contribution.

5.2.5 A total of14no. individual trees, 4no. groups of trees and 2no. hedgerows are of C category retention value. These include a mix of species including common beech, common holly, common yew, cherry laurel, common elder, Lawson cypress, wild cherry, common ash, common lime, robinia and field maple. Trees range from young to mature age class. The trees are of limited value from a development perspective however do provide continuity of canopy cover across the Site.

5.2.6 The remaining 1no. individual tree (T3 Pissardi plum) is of U category retention value. The tree exhibits poor structural form with a bark split associated with the stem. As such, the tree is considered of very limited long-term structural value.

5.2.7 It should be noted that *Table 1* of BS5837:2012 only gives recommendations in relation to remaining years. A tree may be considered to have a longer remaining life, however, still be considered to be of a lower category given its maturity, condition or overall impact to the application site.

5.2.8 In line with BS5837:2012, the category A and B trees should be considered as providing a substantial contribution to a site. Therefore, Category A and B trees should be retained and incorporated into the proposed development where possible and feasible.

5.2.9 Generally, category C and U trees are considered to be of low quality or are young specimens, which can be readily replaced, therefore, should not be considered a constraint to future development. However, it is considered desirable, wherever possible, that a tree should be retained as it ensures continuity of tree cover and provides a mature landscape to the proposed development.

5.2.10 The location of each tree and their associated constraints including canopy spread and root protection areas with and without the proposed development are illustrated on plan numbers DWG 001 Rev A and DWG 002 Rev A both at Appendix 4.

Table 2 Summary of Trees Surveyed

Retention Category	Individual Trees	Groups	Hedges	Totals
Category A (Trees of high quality with an estimated life expectancy of at least 40 years).	2	0	0	2

Category B (Trees of moderate quality with an estimated life expectancy of at least 20 years).	13	0	0	13
Category C (Trees of low quality with an estimated life expectancy of at least 10 years, or young trees with a stem diameter below 150mm).	14	4	2	20
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).	1	0	0	1
Totals	30	4	2	36

6. Impact Appraisal

6.1 Relationship between site layout and trees

6.1.1 In order to implement the proposed development, there will be an overall loss of 8no. individual trees and 2no. hedgerows. These comprise of 1no. B category, 8no. C category and 1no. U category.

6.1.2 Trees T18 (common holly), T19 (cherry laurel), T20 (common elder), H23 (common yew), T24 (Bhutan pine) and T28 (cherry laurel) will be removed to construct the proposed new extension.

6.1.3 T24 (Bhutan pine) is an early-mature specimen located to the west of the existing dwelling. The B category tree is a well-formed specimen with good overall form. Given its location, the loss is not considered to result in a significant impact to the Site or impact the wider public amenity, as there are only partial views from the wider public footpaths/highways.

6.1.4 Trees T18, T19, T20, H23 and T28 are all considered to be of category C retention value. As such, the tree loss is not considered to result in a significant impact to the Site or wider amenity of the area.

6.1.5 Trees H16 (common yew), T22 (wild cherry) and T29 (Lawson cypress) will be removed to implement the proposed landscaping scheme. The trees and hedgerow are considered to be of low category C retention value the loss of which will not result in a substantial impact to the Site or wider area.

6.1.6 Aside from the direct tree loss resulting from the proposed development, 1no. tree will be removed from a risk management perspective. T3 (Pissardi plum) is category U and exhibits poor structural form with very limited future structural life remaining.

6.1.7 The majority of tree loss is of low Category C retention value. As such, the tree loss will be of limited impact to the Site and wider area.

6.1.8 To ensure continuity of canopy cover and fulfil the requirements of The Council's Local Plan

(Policy PL 16), there is a significant commitment to mitigation tree planting which is detailed within the Tree Planting Scheme (Reference: 190319 0880 TPS V1). This includes 9no. new trees planted at select standard size (12-14cm stem girth 2.5-3.5m height). Planting species include silver birch, wild service tree, bird cherry, fastigiate hornbeam and field maple. The native species mix has been selected to compliment the existing trees within the Conservation Area and nearby Richmond Park.

6.1.9 Trees are to be planted in accordance with current industry guidelines as detailed within BS8545: 2014 *Trees – from nursery to independence in the landscape. Recommendations.*

Table 3 Trees to be removed for proposed works

Reason for removal	Proposed works or reason	Tree retention category				Total
		A	B	C	U	
Proposed development	Fell for development	-	T24	H16, T18, T19, T20, T22, H23, T28 & T29		9
Arboricultural management	Fell due to condition	-	-	-	T3	1
Total		0	1	8	1	10

6.1.10 Section 5.1.1 of BS5837:2012 recognises that the competing needs of development mean that trees are only one factor requiring consideration. It also states that misplaced tree retention can be detrimental on a site where it will cause excessive pressure on those trees being retained and could necessitate their removal in the future.

6.1.11 Full specification of tree removal is provided within the complete Tree Schedule. All trees, which are directly or indirectly impacted upon by the Proposed Development, are illustrated on plan DWG 002 Rev A, at Appendix 4.

7. Below Ground Constraints

7.1 Root protection area

7.1.1 The below ground constraints are generally summarised as the root protection areas (RPA). The RPA is an area equivalent to a circle with a radius 12 times the diameter of the trees measured at 1.5 metres for single stemmed trees. For trees with more than one stem, one of two calculation methods should be used. In all cases, the stem diameter(s) should be measured in accordance with Annex C, and the RPA should be guided from Annex D of BS5837:2012.

7.1.2 The RPA is an area in which no ground works should be undertaken without due care in relation to the retained tree(s) and this is to avoid soil compaction, changes in levels or soil contamination which could alter the trees condition and/or stability. The shape of the RPA and its exact location will depend upon arboricultural considerations and ground conditions.

7.1.3 The RPA for the trees has been calculated as prescribed by BS5837:2012 and are shown as circles or polygons on the Tree Constraints Plan at Appendix 4. These plans illustrate the relationship between the RPAs associated with the trees and the proposed development.

7.1.4 In addition to the illustration of RPAs on the plans at Appendix 4, the numerical RPA values are provided within the Tree Schedule at Appendix 3. Within the schedule both RPA radius in metres

from the main stem and total area for the RPA as square metres.

7.2 Existing RPA incursions

7.2.1 The majority of the trees at the Site have existing incursions within RPAs for hard surfacing and buildings, which is illustrated on the Tree Constraints Plan (001 Rev A) at Appendix 4.

7.2.2 There is an existing gravel driveway within the RPAs of trees northeast of the Site including T11, T12, T13, G15 and T36. An existing garage and outbuilding are positioned within the RPA of G15 and G17. There are further existing RPA incursions for patios and pathways.

7.3 Proposed demolition within RPAs

7.3.1 The proposed development will require the demolition and remodelling of existing outbuildings along the northern boundary. This demolition is located within the RPA's of off-site groups G15 (common holly) and G17 (mixed species group) resulting in an incursion of <5%. However, these RPAs are under well-established hard standing ground. The demolition activity should not cause any further damage to these adjacent off-site trees.

7.3.2 The aforementioned removal of existing hard surfacing, foundations and built up ground in RPAs must be undertaken with hand tools only and/or under the direct supervision/guidance of the Arboricultural Clerk of Works (ACoW).

7.4 New RPA incursion for construction of proposed extension

7.4.1 The default position should be that structures are located outside the RPAs of trees to be retained. However, where there is an overriding justification for construction within the RPA, technical solutions might be available to prevent damage to the tree(s). Recommended within BS 5837:2012, paragraph 5.3.1.

7.4.2 In order to construct the proposed extension, there will be a new incursion within the RPA of T21 (Lawson cypress). The incursion will total 3m^2 of the total 72m^2 RPA, therefore a 4% new incursion.

7.4.3 Due to the minimal RPA incursion, it is considered likely that any identified roots will be <25mm diameter and can be pruned back with sharp bypass secateurs (ideally to a growth point). Based on the minimal proposed incursions, a traditional trench filled foundation type for the northern elevation of the extension will not be altered on this occasion.

7.4.4 The removal of the existing soft surface within the RPA must be undertaken using hand-tools only under the direct supervision/guidance of the ACoW. This will ensure that foreseeable damage does not occur to the tree during this phase of works. If any roots with a diameter greater than 25mm, the Tree Officer will be contacted as recommended within BS5837:2012 clause 7.4.2.7 Note 1.

7.4.5 To ensure that the off-site trees G15, G17 and T21 are not negatively impacted during construction, there will be a requirement for ground protection. This will be as per the notes set out in within BS5837:2012 Clause 6.2.3.3 Note a. It will comprise of either a suspended wooden walkway beneath the scaffolding or 100mm of woodchip laid onto a geotextile base overlaid with wooden boards. This will significantly reduce the likelihood of ground compaction. The ground protection has been illustrated on the Tree Protection Plan at Appendix 4.

7.5 New RPA incursion for construction of proposed landscaping

7.5.1 In order to construct the proposed patio, there will be new incursions within the RPAs of T30 (common ash) and T31 (common lime). The incursions will be 13% and 10% respectively.

7.5.2 The removal of the existing surface within the RPA must be undertaken using hand-tools only under the direct supervision/guidance of the ACoW. This will ensure that foreseeable damage

does not occur to the tree during this phase of works. If any roots with a diameter greater than 25mm, the Tree Officer/Project Arboriculturist will be contacted as recommended within BS5837:2012 clause 7.4.2.7 Note 1.

7.5.3 With implementation of the above site supervision, minor surface alterations are unlikely to have a negative impact on retained trees. When laying paving within the RPA of retained trees, sharp sand should be used rather than building sand as building sand has a high salt content potentially detrimental to the trees.

7.6 New RPA incursion for construction of boundary walls

7.6.1 The proposal includes the construction of a new boundary wall along the north and eastern site boundaries. This will require working within the RPAs of boundary trees including T5, T6, T7, T8, T9, T10, T11, T12, T13, G15, G17, T21, T35 and T36.

7.6.2 Although no ground investigation was undertaken at the time of the survey, is it highly likely that significant roots >25mm diameter will be identified during foundation excavations for the new boundary walls. To avoid further damage through construction, foundations for the new wall will follow the existing fence line which sits on a brick foundation. Where large surface roots prevent new wall foundation being constructed, there will be a requirement to construct the new wall foundations on an engineered design pile or lintel as described below.

7.6.3 This would involve excavating the wall foundations by hand (either using hand tools or an air-spade), to retain all root mass below the surface. Following this, the wall foundations will be constructed on an engineered design pile, with a surface ground beam. This will provide an elevated support surface with only a minimal requirement for ground excavation. The piles can be inserted using small precision devices without the requirement for heavy plant machinery. The piles will be inserted at specific intervals where gaps in the root mass appear (adequate intervals for load-bearing capacity to be advised by a construction engineer).

7.6.4 To ensure the successful retention of the trees, it is critical that foundation excavations within the RPAs are undertaken under the direct supervision/guidance of the Arboricultural Clerk of Works (ACoW). This will ensure that foreseeable damage does not occur to retained trees during this phase of works. This methodology will follow guidance of Section 7.2.3 of BS5837:2012.

7.6.5 Whilst the construction working zone is in place, any exposed roots, which do not conflict with development, can be immediately wrapped or covered in hessian and kept moist. Prior to backfilling, retained roots should be surrounded with topsoil, or other loose inert granular fill, before other suitable material is replaced. This must be free of contaminates or other foreign object which may be potentially injurious to tree roots. This will follow the guidance of Sections 7.2.2 and 7.2.4 of BS5837:2012.

7.7 Infrastructure

7.7.1 Due to the details provided for this application there is insufficient information relating to below ground infrastructure available at present to comment as to whether or not there would be adequate space for these to be installed outside of RPAs. However, if services do enter RPAs the use of hand digging as detailed in the National Joint Utilities Group publication *'Guidelines for the Planning, Installation and Maintenance of Utility Services in Proximity to Trees'* (NJUG 10, Volume 4, 2007) will be undertaken to minimise the impact on the tree roots.

8. Above Ground Constraints

8.1 Canopy protection zone

8.1.1 The above ground constraints predominantly refer to the impact of the canopy of any retained

tree on the Site either by size and form, shadowing and nuisance factors. As a result, it is sometimes required that a canopy protection zone is established to ensure it is not harmed during construction.

8.1.2 Where the current and/or ultimate height of a Category A, B or C tree will cause an obstruction to the proposed development, this must be considered as a constraint. This is usually considered in terms of issues relating to shade and light.

8.1.3 In order to provide adequate clearance for the construction working zone, there will be a requirement to raise/reduce the lower south side canopy of G15 (common holly) to provide a 1m clearance over the existing garage and outbuildings.

8.1.4 In order to provide adequate clearance for the construction working zone, there will be a requirement to reduce the south side canopy of G17 (mixed species group) back to the boundary fenceline.

8.1.5 An Amenity Clearance Zone (ACZ) is used to consider the impact of the proximity of retained trees to structures. The ACZ is defined as an area surrounding the tree that enables a satisfactory relationship to exist between the property and the tree, and as such is equal to two-thirds of the tree's expected mature height. The ACZ is a combination of factors such as:

- Shading (of buildings and open space)
- Direct damage to structures
- Future pressure for removal
- Seasonal nuisance (e.g. leaf fall blocking gutters, fruit fall creating slippery patches and honey dew dripping on vehicles and surfaces)

8.1.6 Consideration is also given to species characteristics such as:

- Deciduous or evergreen;
- Density of foliage;

8.1.7 Although not part of BS5837, the ACZ also reflects a more intangible factor of how comfortable the inhabitant of the property is likely to feel by the proximity of the tree to the house. It serves to protect retained trees from pressure to be felled or undergo surgery after occupation of the property.

8.1.8 The tree canopies are marked on the attached TCP as a continuous line around each individual tree.

8.2 Impact on amenity

8.2.1 In order to implement the proposed development, there will be an overall loss of 8no. individual trees and 2no. hedgerows. These comprise of 1no. B category, 8no. C category and 1no. U category.

8.2.2 The majority of tree loss is of low Category C retention value. As such, the tree loss will be of limited impact to the Site and wider area. Nevertheless, to ensure continuity of canopy cover and fulfil the requirements of The Council's Local Plan (Policy PL 16), there is a significant commitment to mitigation tree planting which is detailed within the Tree Planting Scheme (Reference: 190319 0880 TPS V1).

8.3 Future growth

8.3.1 The future growth of trees is not considered to be a significant issue to the future of the proposed

development of the trees on-site. Boundary trees may require minor future pruning. This can be addressed with minor pruning of the lateral branches, which encroach towards the proposed built structures, parking and garden space.

8.4 Leaves, fruit and honeydew

8.4.1 Given the proximity of so many trees on and off-site, leaf fall will be a problem across the whole of the Site in autumn. Where leaf fall will be a problem to the gutters, this can be managed through regular clearance and incorporating grates into the gutters so avoiding regular blockages.

8.4.2 Honeydew is not likely to be a significant problem within the Site as there are no lime or sycamore trees on and within influencing distance of the Site.

9. Conclusions

9.1.1 This survey and impact assessment includes records of 8no. individual trees and 2no. hedgerows. These comprise of 1no. B category, 8no. C category and 1no. U category. The application considers all trees located on or within influencing distance of the proposed development area.

9.1.2 It has been considered desirable wherever possible that trees and groups of trees should be retained, although care has been exercised over misplaced tree preservation. In terms of the current site layout plan, due to the size and scale of building requirement there is conflict with the trees that cannot be avoided and therefore mitigation proposals are considered.

9.1.3 In order to implement the proposed development, there will be an overall loss of 8no. individual trees and 2no. hedgerows. These comprise of 1no. B category, 8no. C category and 1no. U category. To ensure continuity of canopy cover and fulfil the requirements of The Council's Local Plan (Policy PL 16), there is a significant commitment to mitigation tree planting which is detailed within the Tree Planting Scheme (Reference: 190319 0880 TPS V1). This includes 9no. new trees planted at select standard size (12-14cm stem girth 2.5-3.5m height).

9.1.4 In order to construct the proposed extension, there will be a new incursion within the RPA of T21 (Lawson cypress). The incursion will total 3m^2 of the total 72m^2 RPA, therefore a 4% new incursion. Due to the minimal RPA incursion, it is considered likely that any identified roots will be <25mm diameter and can be pruned back with sharp bypass secateurs (ideally to a growth point). Based on the minimal proposed incursions, a traditional trench filled foundation type for the northern elevation of the extension will not be altered on this occasion.

9.1.5 The proposal includes the construction of a new boundary wall along the north and eastern site boundaries. This will require working within the RPAs of boundary trees including T5, T6, T7, T8, T9, T10, T11, T12, T13, G15, G17, T21, T35 and T36. To avoid further damage through construction, the foundations for the new wall will follow the existing fence line which sits on a brick foundation. Where large surface roots prevent new wall foundation being constructed, there will be a requirement to construct the new wall foundations on an engineered design pile or lintel.

10. Recommendations

10.1.1 The removal of existing hard surfacing, foundations and built up ground in RPAs must be undertaken with hand tools only and/or under the direct supervision/guidance of the Arboricultural Clerk of Works.

10.1.2 The successful retention of those trees that will remain on the Site will be dependent upon the quality and maintenance of any protection system that is put in place. An Arboricultural Method Statement should be provided to detail how the necessary tree protection will be implemented.

10.1.3 An indicative draft tree protection plan (DWG 004 Rev A – Appendix 4) has been provided,

however, this is subject to alteration following a final decision notice and a detailed method statement should be provided as part of a robust planning condition.

10.1.4 It is critical that all protective fencing is installed and erected and the CEZ enforced prior to the commencement of any works on-site. Following installation of tree protection, a site meeting will be undertaken with the Tree Officer to ensure satisfaction of all parties prior to any on-site works commencing.

10.1.5 It is recommended that a suitable competent arboriculturist, undertakes the site supervision and monitoring works.

10.1.6 In order for tree and root protection measures to work effectively all personnel associated with the construction process must be familiar with the Tree Protection Plan.

10.1.7 It is recommended that planning conditions be adhered to any approval for a suitable tree planting scheme and for the production of an Arboricultural Method Statement for implementation of tree protection, pre-commencement meetings and on-going site supervision.

11. References

11.1.1 British Standard 5837:2012 'Trees in Relation to Design, Demolition and Construction - Recommendation'

11.1.2 British Standard 3998:2010 'Tree work – Recommendations'

11.1.3 British Standard 8545:2014 Trees: from nursery to independence in the landscape – Recommendations

11.1.4 London Borough of Richmond Upon Thames Local Plan (July 2018) Policy PL 16 Trees, Woodlands and Landscape

11.1.5 National Planning Policy Framework (NPPF) 2018

11.1.6 The Forestry Act 1967

11.1.7 The Town and Country Planning Act 1990

11.1.8 The Town and Country Planning (Tree Preservation) (England) Regulations 2012

12. Caveats and Limitations

12.1.1 The report is for the sole use of the client and its reproduction or use by anyone else is forbidden unless written consent is given by the author.

12.1.2 This is an arboricultural report and as such no reliance should be given to comments relating to buildings, engineering or soil.

12.1.3 This is not an arboricultural health and safety survey, a more detailed survey of internal decay detection etc can be supplied but would be subject to a further fee.

12.1.4 This is a report which should be to accompany a planning application and provides no detail specifically in relation to the health and safety of the trees.

12.1.5 All tree inspections were undertaken from ground level and no climbing inspections were undertaken.

12.1.6 For the purposes of this survey all dimensions of trees and their associated parts are based on estimation unless otherwise stated.

12.1.7 Trees are growing dynamic structures. Whilst reasonable effort has been made to identify defects within the trees inspected, no guarantee can be given as to the absolute safety or otherwise of any individual tree. No tree is ever absolutely safe due to the unpredictable laws and

forces of nature. As a result of this, natural failure of intact trees will occur; extreme climatic conditions can cause damage to even apparently healthy trees.

12.1.8 Trees are living organisms whose health, condition and structure can change quickly and without warning. Therefore, the contents of this report are valid for a period of one year from the date of this survey.

12.1.9 On undertaking the recommended works, the arborist/tree surgeon must without delay report any defects that become apparent while climbing or working on the tree/s in question. Those defects must be reported immediately to the relevant project manager, landowner and/or the author of this report to enable the appropriate remedial action.

12.1.10 This is an arboricultural report and therefore does not rely on ecological or archaeological data. If either is commented upon within the report further professional advice should be sought.

Appendix 1: Aerial Photograph

264 Sheen Lane, East Sheen, London


Redline site boundary
B351
Clare Lawn Ave
Sheen Ln
Parkgate Gardens
Parkgate Gardens
Parkgate Gardens
B351
Fife Rd
Fife Rd
Fife Rd
Fife Rd
Fife Rd
Fife Rd
Fife Rd
Sheen Gate
Sheen Gate Toilets

Appendix 2: Survey Methodology

i. The trees on the Site were originally surveyed without reference to site layout as detailed in paragraph 4.4.1.1 of BS5837:2012. However, for the purposes of the arboricultural impact assessment the design proposal for the Site has been considered.

ii. The position of each tree was plotted with reference to the supplied ordinance survey plan. Small trees with a stem diameter less the 75mm were generally not surveyed as they would either be easily replaced or relocated.

iii. Each individual tree has been given a tree identification number, the groups and hedges clearly defined for the purpose of this report. Metal tags have not been used for this survey as identification on-site does not require this. The tree numbers associated with each tree are cross referenced within the schedule and plans at Appendix 3 and 4 respectfully.

iv. The tree species have been recorded with both common and botanical names.

v. All tree heights have been assessed using a clinometer and where indicated in groups the height of the tallest tree was measured unless otherwise stated. Tree heights are given in metres.

vi. All stem diameters were measured at 1.5 metres above ground level and are given in millimetre units (unless otherwise stated where "gl" is an abbreviation for ground level where diameter was measured just above root flare, "est" is an estimate and "av" is an average).

vii. The canopy spread is recorded in either the four cardinal points or is given as an average diameter for the crown, especially in groups or where the crown is evenly weighted. Canopy spreads are measured in metres.

viii. The height of the ground clearance is given in metres and is an estimate of the height of the first branch above ground level.

ix. In absence of detailed information on the age the following classification has been used:

Young	Young trees aged less than 1/3 life expectancy;
Semi-Mature	Established specimen approaching 1/3 life expectancy;
Early-Mature	Middle age trees 1/3 – 2/3 life expectancy;
Mature	Mature trees over 2/3 life expectancy;
Over-Mature	Over-mature – declining or moribund trees of low vigour; and
Veteran	Veteran trees – specimens exhibiting features of biological, cultural or aesthetic value that are characteristic of, but not exclusive to, individuals surviving beyond the typical age range for the species concerned.

x. Age class is indicative and will vary between species.

xi. The structural condition of the trees has been assessed and is summarised as:

Good	Few minor defects of little overall significance;
Fair	A significant defect or several small defects; and
Poor	Major defect present or many small defects.

xii. The physiological condition has been recorded to provide an indication of the tree's general health and vitality. The trees have been described thus:

Good	Generally in good health typical of the species;
Fair	Reasonable health with few defects;
Poor	Trees that exhibit significant defects which are irremediable or moribund tree; and
Dead	Tree has died

xiii. Each tree was individually assessed and comments, where appropriate, were recorded for the condition of each tree's roots, main stem and crown.

xiv. General comments have also been made where appropriate, with recommendations when relatively immediate works are given.

xv. Estimated remaining contribution has been categorised as: less than 10 years, 10-20 years, 20-40 years or over 40 years, based upon an assessment of the tree's potential safe useful life expectancy. The remaining contribution in years has not always been directly followed in relation to the retention categories of the trees as trees may have a long remaining life however be of little significance in terms of development.

Appendix 3: Schedules

BS5837:2012 Cascade Chart

Complete Tree Schedule

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BS5837:2012
Cascade Chart for Tree Quality Assessment

Category and Definition	Criteria (including subcategories where appropriate)			ID Colour 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; and/or • Trees infected with pathogens of significance to the 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.*			**Dark Red** (127-000-000)
Trees to be considered for retention (see Note)				
	1 - Mainly arboricultural qualities	**2 - Mainly landscape qualities**	**3 - Mainly cultural values, including conservation**	
Category A **Trees of high quality** with an estimated remaining life expectancy of at least 40 years.	Trees that are particularly good examples of their species, especially if rare or unusual; or those that are essential components of groups or forma l or semi-formal arboricul-tural 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** (000-255-000)
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 unsympathet-ic 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.	**Mid Blue** (000-000-255)
Category C **Trees of low quality** currently in adequate condition with at least 10 years life expectancy, or yound 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 collective landscape value; and/or trees offering low or only temporary/ transient landscape benefits.	Trees with ***no*** material conservation or other cultural value.	**Grey** (091-091-091)

BS5837:2012 Tree Schedule

Client Name: William Smalley
Site: 264 Sheen Lane, London
Tags: N/A **Ref No:** 190228 0880 TS V1

Consultant: S. Onslow
Survey Date: February 2019

Tree No.	Tag No.	Species (Common Name)	Species (Botanical Name)	Height (m)	Stem Dia (mm)	Crown Spread (m)				Height of Crown Clearance (m)	Age Class	Phys Con	Struc Con	Additional notes	Preliminary works recommendations	Estimated remaining contribution	Ret Cat	RPA (m^2)	RPA Radius (m)
						N	E	S	W										
T1	0	Copper Beech	*Fagus sylvatica 'Purpurea'*	17.5	855	11	9	9	8	4	Mat	Fair	Good	Located to SW corner of garden. Stands within raised shrub border. Single-stemmed. Structural canopy divided from c.4m. Lage mature specimen with wide spreading canopy. Appears inner canopy has been slightly over-thinned. Amenity value given proximity to the highway.	No works required at the time of inspection.	>40 yrs	A1/2	327	10.20
G2	0	A Group	*A Group*	7	100	2	2	2	2	1	Yng	Good	Good	Located along S boundary of garden. Stands within raised shrub border. Linear group of mixed species low-level planting. Species include cherry laurel, lonicera, common yew, jacmontii birch, cordyline, spotted laurel, forsythia, elaeagnus, Camelia, common elder, bay laurel and low-level vegetation. Collectively provides ornamental site value and low-level screening.	No works required at the time of inspection.	10 to 20 yrs	C2	5	1.20
T3	0	Pissards Plum	*Prunus cerasifera 'Atropurpurea'*	7.5	205	2	3	3	4	3	S/Mat	Decline	Poor	Located to S boundary of garden. Stands within raised shrub border. Single-stemmed. Longitudinal bark split from 1.8-2.2m associated with stem. Dieback throughout canopy. Limited future life remaining.	No works required at the time of inspection.	<10 yrs	U	18	2.40
T4	0	Smooth Japanese Maple	*Acer palmatum*	7	210	3	2	3	5	1.8-N	E/Mat	Good	Good	Located to SE corner of garden. Stands within shrub border. Single-stemmed. Codominant stems divide at c.1.6m. Leaning tendency and canopy bias to NW. Ornamental specimen.	No works required at the time of inspection.	20 to 40 yrs	B1/2	18	2.40
T5	0	Common Beech	*Fagus sylvatica*	19	705	8	4	7	11	4.5-E	Mat	Good	Fair	Located along E boundary of garden. Stands within shrub border forming wider group of beech. Single-stemmed. Slight lean to the west. Subordinate canopy mutually suppressed with adjacent specimen. Important site and wider amenity contribution.	No works required at the time of inspection.	>40 yrs	B1/2	222	8.40
T6	0	Common Beech	*Fagus sylvatica*	23	725	9	7	5	7	5-E	Mat	Good	Fair	Located along E boundary of garden. Stands within shrub border forming wider group of beech. Single-stemmed. Multiple bark wounds to lower W side stem and stem exudate. Subordinate canopy mutually suppressed with adjacent specimen. Important site and wider amenity contribution.	No works required at the time of inspection.	>40 yrs	B1/2	238	8.70
T7	0	Common Beech	*Fagus sylvatica*	25	470	3	3	4	4	11.2	Mat	Good	Fair	Located along E boundary of garden. Stands within shrub border forming wider group of beech. Single-stemmed. Longitudinal bark ridge to W side stem base. Tall slender form. Slightly suppressed by adjacent dominant beech. Important value within wider group.	No works required at the time of inspection.	20 to 40 yrs	B1/2	102	5.70

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BS5837:2012 Tree Schedule

Tree No.	Tag No.	Species (Common Name)	Species (Botanical Name)	Height (m)	Stem Dia (mm)	Crown Spread (m)				Height of Crown Clearance (m)	Age Class	Phys Con	Struc Con	Additional notes	Preliminary works recommendations	Estimated remaining contribution	Ret Cat	RPA (m^2)	RPA Radius (m)
						N	E	S	W										
T8	0	Common Beech	*Fagus sylvatica*	25	810	6	8	5	10	7	Mat	Good	Fair	Located along E boundary of garden. Stands within shrub border forming wider group of beech. Single-stemmed. Occlusion pocket at 1m to S side of stem. Codominant union divides at c.5.2m with Prominent ribbing below (stable at time of assessment). Subordinate canopy mutually suppressed with adjacent specimen. Important site and wider amenity contribution.	No works required at the time of inspection.	>40 yrs	**B1/2**	290	9.60
T9	0	Common Beech	*Fagus sylvatica*	24	695	9	8	3	9	5-E	Mat	Good	Fair	Located along E boundary of garden. Stands within shrub border forming wider group of beech. Single-stemmed. Slight lean to the N. Codominant stems divide from c.3.6m with Prominent rubbing below (stable at time of assessment). Subordinate canopy mutually suppressed with adjacent specimen. Low canopy previously raised. Important site and wider amenity contribution.	No works required at the time of inspection.	>40 yrs	**B1/2**	222	8.40
T10	0	Common Beech	*Fagus sylvatica*	13	380	4	5	5	9	4.2-E	E/Mat	Good	Fair	Located along E boundary of garden. Stands within shrub border forming wider group of beech. Single-stemmed. Suppressed specimen given its location below large off-site oak tree. Screening value within wider group.	No works required at the time of inspection.	20 to 40 yrs	**C1/2**	64	4.50
T11	0	Common Beech	*Fagus sylvatica*	14	505	5	5	4	6	4.2-W	E/Mat	Good	Fair	Located along E boundary of garden. Stands within shrub border forming wider group of beech. Single-stemmed. Leaning tendency to NW. Suppressed due to establishment below canopy of large off-site oak. Shares cohesive canopy with neighbouring beech. Important value within wider group.	No works required at the time of inspection.	20 to 40 yrs	**B1/2**	113	6.00
T12	0	Common Beech	*Fagus sylvatica*	15	695	8	8	3	9	3	Mat	Good	Fair	Located along E boundary of garden. Stands within shrub border forming wider group of beech. Single-stemmed. Codominant union divides from c.3.6m (stable at time of assessment). Subordinate canopy mutually suppressed by adjacent beech. Important site and wider amenity value given close proximity to the highway.	No works required at the time of inspection.	>40 yrs	**B1/2**	222	8.40
T13	0	Atlas cedar	*Cedrus atlantica*	24	745	5	3	6	8	7.5	Mat	Good	Fair	Located along E boundary of garden. Stands within shrub border adjacent gravel driveway. Single-stemmed. Tall slender form. Subordinate canopy bias to west. Dense foliage cover. Important site and wider amenity value.	No works required at the time of inspection.	>40 yrs	**B1/2**	254	9.00

BS5837:2012 Tree Schedule

Tree No.	Tag No.	Species (Common Name)	Species (Botanical Name)	Height (m)	Stem Dia (mm)	Crown Spread (m)				Height of Crown Clearance (m)	Age Class	Phys Con	Struc Con	Additional notes	Preliminary works recommendations	Estimated remaining contribution	Ret Cat	RPA (m^2)	RPA Radius (m)
						N	E	S	W										
G14	0	A Group	*A Group*	5	100	2	2	2	2	1	Yng	Good	Fair	Located along E boundary of garden. Mixed group of predominantly shrubs. Species include cherry laurel, privet, spotted laurel, rhododendron, common holly and viburnum. Collectively provides ornamental site value and low-level boundary screening.	No works required at the time of inspection.	10 to 20 yrs	**C2**	5	1.20
G15	0	Common Holly	*Ilex aquifolium*	12	280	4	4	6	4	1.5	E/Mat	Good	Fair	Located off-site beyond N boundary fence line. Linear group of common holly running e/w immediately beyond boundary. Height differentiates. Central/west side of group encroaches over garage and is in direct contact with roof tiles. Group provides screening from off-site property.	Raise/reduce canopy south side to provide a 1m clearance from garage and outbuildings.	20 to 40 yrs	**C2**	34	3.30
H16	0	Common Yew	*Taxus baccata*	1.8	100	1	1	1	1	0	Yng	Good	Good	Located towards N of site. Short section of yew hedging running n/s dividing driveway and lawn area. Well-managed hedge. Ornamental site value.	No works required at the time of inspection.	20 to 40 yrs	**C2**	5	1.20
G17	0	A Group	*A Group*	7	180	2	2	2	2	1	S/Mat	Good	Good	Located off-site beyond N boundary fence line. An extension to the previous off-site group although smaller in height. Species comprise of common holly, bamboo, cherry laurel and low-level vegetation. Collectively provide screening from off-site property.	Reduce combined south side canopy back to boundary fenceline for construction working zone.	10 to 20 yrs	**C2**	14	2.10
T18	0	Common Holly	*Ilex aquifolium*	9	284	3	3	3	3	1.7	S/Mat	Decline	Fair	Located upon lawn area towards N boundary fence line. Multi-stemmed from base. Foliage cover appears very sparse. Limited long-term value.	No works required at the time of inspection.	10 to 20 yrs	**C1**	34	3.30
T19	0	Cherry Laurel	*Prunus laurocerasus*	7	412	4	4	6	3	0.5	Mat	Good	Fair	Located towards NW corner of site. Multi-stemmed from base. Compost heap at base. Limited value beyond partial screening.	No works required at the time of inspection.	10 to 20 yrs	**C1/2**	72	4.80
T20	0	Common or Black Elder	*Sambucas nigra*	5	160	2	3	2	2	1.8	S/Mat	Fair	Fair	Located towards NW boundary. Tree stands close to neighbouring property. Small suppressed elder of low value.	No works required at the time of inspection.	10 to 20 yrs	**C1**	10	1.80
T21	0	Lawson Cypress	*Chamaecyparis lawsoniana*	9.5	400	3	3	3	3	1	Mat	Good	Fair	Located off-site beyond NW boundary fence line. No acces to carry out detailed assessment, measurements estimated. Single-stemmed. Slight lean to north. Dense ivy coverage. Previously heavily topped. Limited individual value beyond partial screening between gardens.	No works required at the time of inspection.	10 to 20 yrs	**C1**	72	4.80

BS5837:2012 Tree Schedule

Tree No.	Tag No.	Species (Common Name)	Species (Botanical Name)	Height (m)	Stem Dia (mm)	Crown Spread (m)				Height of Crown Clearance (m)	Age Class	Phys Con	Struc Con	Additional notes	Preliminary works recommendations	Estimated remaining contribution	Ret Cat	RPA (m^2)	RPA Radius (m)
						N	E	S	W										
T22	0	Wild Cherry	*Prunus avium*	9	439	5	5	6	4	1.2	S/Mat	Fair	Fair	Located to north of site upon lawn area. Multi-stemmed from c.1m. Extensive gummy stem exudate consistent with Bacterial Canker. Heavy previous pruning throughout canopy. Limited long-term remaining site value.	No works required at the time of inspection.	10 to 20 yrs	C1	92	5.40
H23	0	Common Yew	*Taxus baccata*	1.8	100	1	1	1	1	0	Yng	Good	Good	Located towards central/western aspect of site. Linear hedgerow running e/w dividing garden areas. Breaks for pedestrian gateway. Well-managed. Ornamental site value.	No works required at the time of inspection.	20 to 40 yrs	C2	5	1.20
T24	0	Bhutan Pine	*Pinus wallichiana*	16	475	4	5	4	5	3.5	E/Mat	Good	Good	Located upon lawn area towards W boundary. Single-stemmed. Dense, well-balanced canopy. Potential long-term value to site.	No works required at the time of inspection.	>40 yrs	B1/2	102	5.70
T25	0	Common Yew	*Taxus baccata*	5.8	286	2	2	2	3	1.5	S/Mat	Good	Fair	Located off-site beyond W boundary fence line. No access to carry out detailed assessment, measurements are estimated. Twin-stemmed. E side canopy trimmed back to boundary wall.	No works required at the time of inspection.	20 to 40 yrs	C1/2	34	3.30
T26	0	Common Holly	*Ilex aquifolium*	4	120	2	2	2	2	1.5	Yng	Good	Fair	Located off-site beyond W boundary fence line. No access to carry out detailed assessment, measurements are estimated. Small holly shares continuous canopy with adjacent yew. Contributes to boundary screening.	No works required at the time of inspection.	10 to 20 yrs	C1	7	1.50
T28	0	Cherry Laurel	*Prunus laurocerasus*	7.5	217	4	4	4	3	1.5	S/Mat	Good	Fair	Located within shrub border towards W boundary. Stands within close proximity to wall. Multi-stemmed. Stems lean to east. Subordinate canopy. Positioning restricts long-term potential.	No works required at the time of inspection.	10 to 20 yrs	C1	23	2.70
T29	0	Lawson Cypress	*Chamaecyparis lawsoniana*	15	539	3	3	4	3	1.7	Mat	Good	Fair	Located upon lawn towards W boundary. Multi-stemmed specimen. Very narrow structural unions typical of species. Relatively dense, radial canopy. Ornamental site value.	No works required at the time of inspection.	10 to 20 yrs	C1/2	137	6.60
T30	0	Common Ash	*Fraxinus excelsior*	13	215	2	4	4	4	3.2	S/Mat	Good	Fair	Located towards W boundary. Single-stemmed. Slender, drawn-up form. Limited individual value.	No works required at the time of inspection.	10 to 20 yrs	C1/2	23	2.70
T31	0	Common Lime	*Tilia x europaea*	12.5	260	5	3	4	4	2-N	S/Mat	Good	Fair	Located along W boundary. Unsure of ownership. Establishing through mesh fencing. Single-stemmed. Partial ivy coverage. Tall slender form. Canopy continuous with adjacent ash. Contributes to boundary screen.	Sever and remove ivy.	20 to 40 yrs	C1/2	28	3.00
T32	0	Strawberry Tree	*Arbutus sp.*	6	368	4	5	4	4	0.5	E/Mat	Good	Good	Located along W boundary. Multi-stemmed. Dense foliage cover. Attractive ornamental site value.	No works required at the time of inspection.	20 to 40 yrs	B1/2	64	4.50

BS5837:2012 Tree Schedule

Tree No.	Tag No.	Species (Common Name)	Species (Botanical Name)	Height (m)	Stem Dia (mm)	Crown Spread (m)				Height of Crown Clearance (m)	Age Class	Phys Con	Struc Con	Additional notes	Preliminary works recommendations	Estimated remaining contribution	Ret Cat	RPA (m^2)	RPA Radius (m)
						N	E	S	W										
T33	0	Robinia	*Robinia pseudoacacia*	14	446	6	3	4	6	4	E/Mat	Fair	Fair	Located towards W boundary. Twin-stemmed from base with narrow acute union. Dense ivy coverage. Leans to NW. Bud coverage appears slightly sparse in parts.	Sever and remove ivy.	10 to 20 yrs	C1/2	92	5.40
T34	0	Pedunculate Oak	*Quercus robur*	15	755	7	6	8	8	2.9	Mat	Fair	Good	Located towards central/southern aspect of site. Stands centrally to main lawn. Single-stemmed. Bench swing attached to lower south side branch. Previous storm damaged branch to central canopy. Overall bud density appears quite sparse in parts. Previous pruning throughout canopy. Important feature specimen.	Consider management practice to imporove physiological condition. Mulch to canopy drip line and incorporate soil amendment (Biochar).	20 to 40 yrs	B1/2	254	9.00
T35	0	Pedunculate Oak	*Quercus robur*	21	905	6	6	10	9	4-E	Mat	Good	Fair	Located off-site beyond E boundary fence line. Street tree located within pedestrian footpath. Large mature specimen. Large limb failure and subsequent stem tearing at c.4.5m west side. Prominent specimen. Important amenity value.	No works required at the time of inspection.	>40 yrs	B1/2	366	10.80
T36	0	Pedunculate Oak	*Quercus robur*	26	1105	12	10	12	14	5.8	Mat	Good	Good	Located off-site beyond E boundary. Positioned within public footpath adjacent highway. Large mature specimen. Single-stemmed. Wide spreading canopy with dense bud coverage. Significant long-term amenity value.	No works required at the time of inspection.	>40 yrs	A1/2	547	13.20
T37	0	Field Maple	*Acer campestre*	10	250	3	3	3	3	2.5	S/Mat	Good	Fair	Located off-site beyond E boundary. Street tree positioned with public footpath adjacent highway. Single-stemmed. Bark wound at c.0.3m south side (occluding). Codominant stems divide from c.2.2m. Canopy continuous with laurel adjacent.	No works required at the time of inspection.	20 to 40 yrs	C1/2	28	3.00

Appendix 4: Plans

Tree Constraints Plan (001 Rev A)

Arboricultural Impact Plan (002 Rev B)

Tree Retention and Removal Plan (003 Rev B)

Draft Tree Protection Plan (004 Rev B)

Tree Planting Scheme (005 Rev B)

Scale: 1/200 @ A1

A Category Trees /
High Retention Value

B Category Trees /
Moderate Retention Value

C Category Trees /
Low Retention Value

U Category Trees /
Remove

Canopy Spread (m)
Tree Stem
Root Protection
Area (RPA)

Date: May 2021

Client: William Smalley

Project: 264 Sheen Lane, London

Title: Tree Constraints Plan

Map file reference	DWG No
210520 0880 TCP V1a	001 Rev B

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E. info@wnic.co.uk
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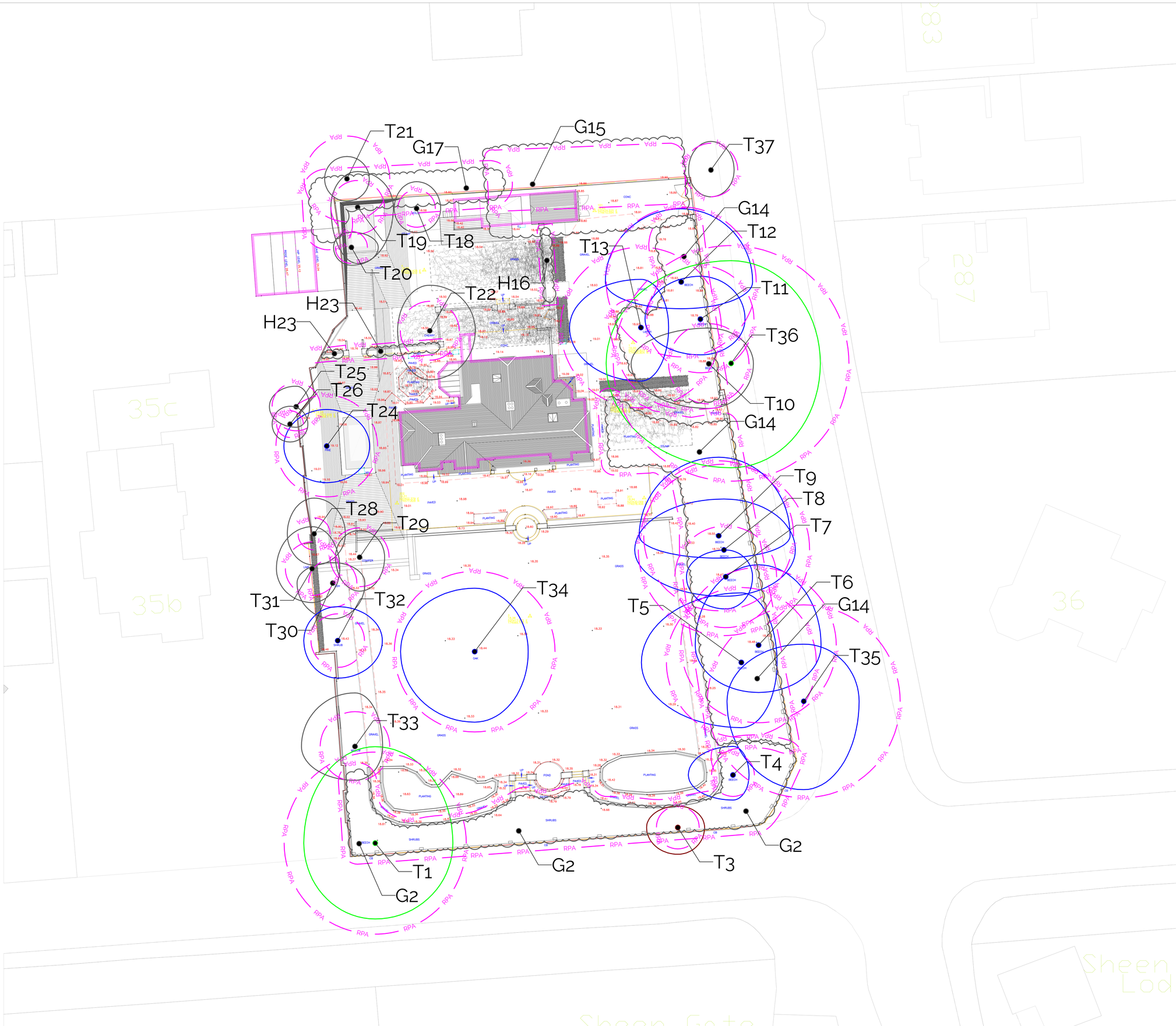
Scale: 1/200 @ A1



A Category Trees / High Retention Value

B Category Trees / Moderate Retention Value

C Category Trees / Low Retention Value

U Category Trees / Remove

Canopy Spread (m)

Tree Stem

Root Protection Area (RPA)

Date: May 2021

Client: William Smalley

Project: 264 Sheen Lane, London

Title: Arboricultural Impact Plan

Map file reference	DWG No
210519 0880 AIP V1a	002 Rev B

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E. info@wnic.co.uk
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Scale: 1/200 @ A1

N

Trees to be ***retained*** for development

Trees to be ***removed*** for development

Canopy Spread (m)

Tree Stem

T21 G17 G15 T37 G14 T12 T18 T19 T13 T20 H16 T22 T11 H23 H23 T36 T25 T10 G14 T26 T9 T24 T8 T7 T28 T29 T6 T31 T32 T34 G14 T5 T30 T35 T33 T4 G2 T3 T1 G2 G2

Date: May 2021

Client: William Smalley

Project: 264 Sheen Lane, London

Title: Tree Retention and Removal Plan

Map file reference	DWG No
210519 0880 TRRP V1	003 Rev B

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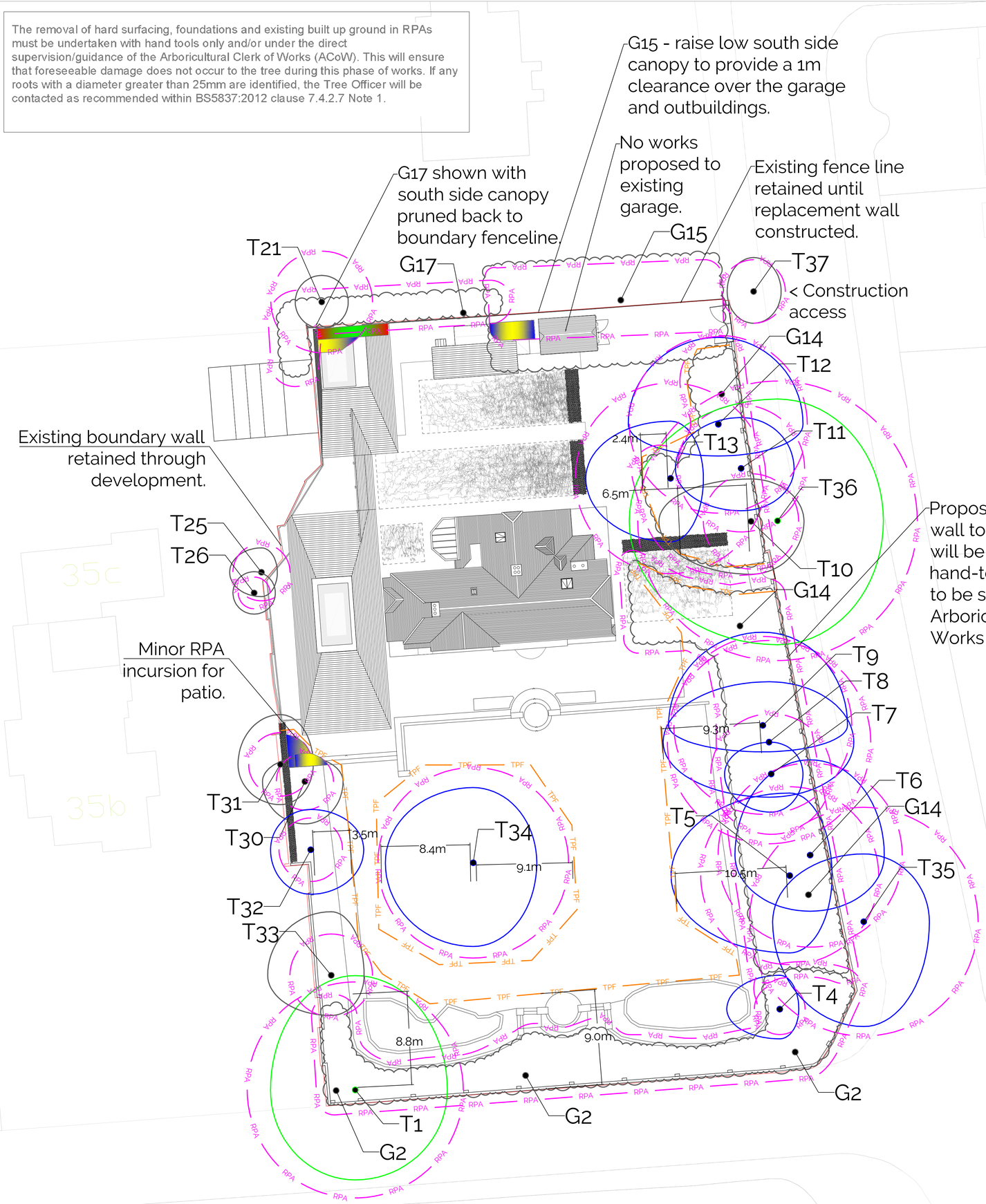
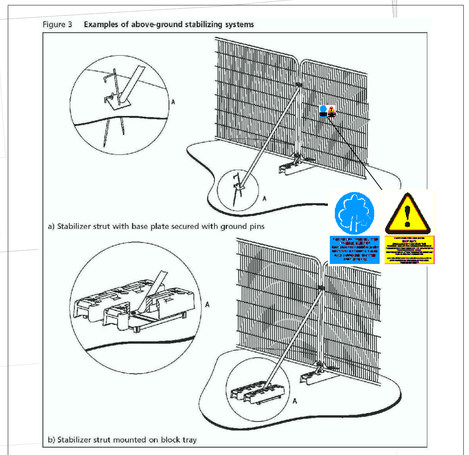
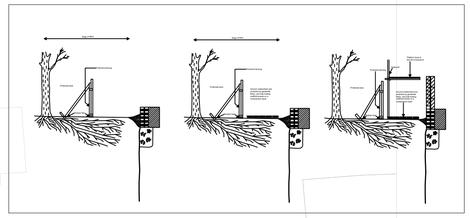
The removal of hard surfacing, foundations and existing built up ground in RPAs must be undertaken with hand tools only and/or under the direct supervision/guidance of the Arboricultural Clerk of Works (ACoW). This will ensure that foreseeable damage does not occur to the tree during this phase of works. If any roots with a diameter greater than 25mm are identified, the Tree Officer will be contacted as recommended within BS5837:2012 clause 7.4.2.7 Note 1.





Tree Protection Fencing



Ground Guards

Scale: 1/200 @ A1

A Category Trees / High Retention Value

B Category Trees / Moderate Retention Value

C Category Trees / Low Retention Value

U Category Trees / Remove

Canopy Spread (m)
Tree Stem
Root Protection Area (RPA)

Tree Protection Fencing

RPA incursions for the proposed development. All works within RPAs to be carried out using hand-tools only under direct supervision of the ACoW.

Location of ground protection for construction working zone within the unsurfaced RPA of T21. Ground Guards to be used.

Date: March 2019

Client: William Smalley

Project: 264 Sheen Lane, London

Title: Tree Protection Plan

Map file reference	DWG No
190318 0880 TPP V1	004 Rev A

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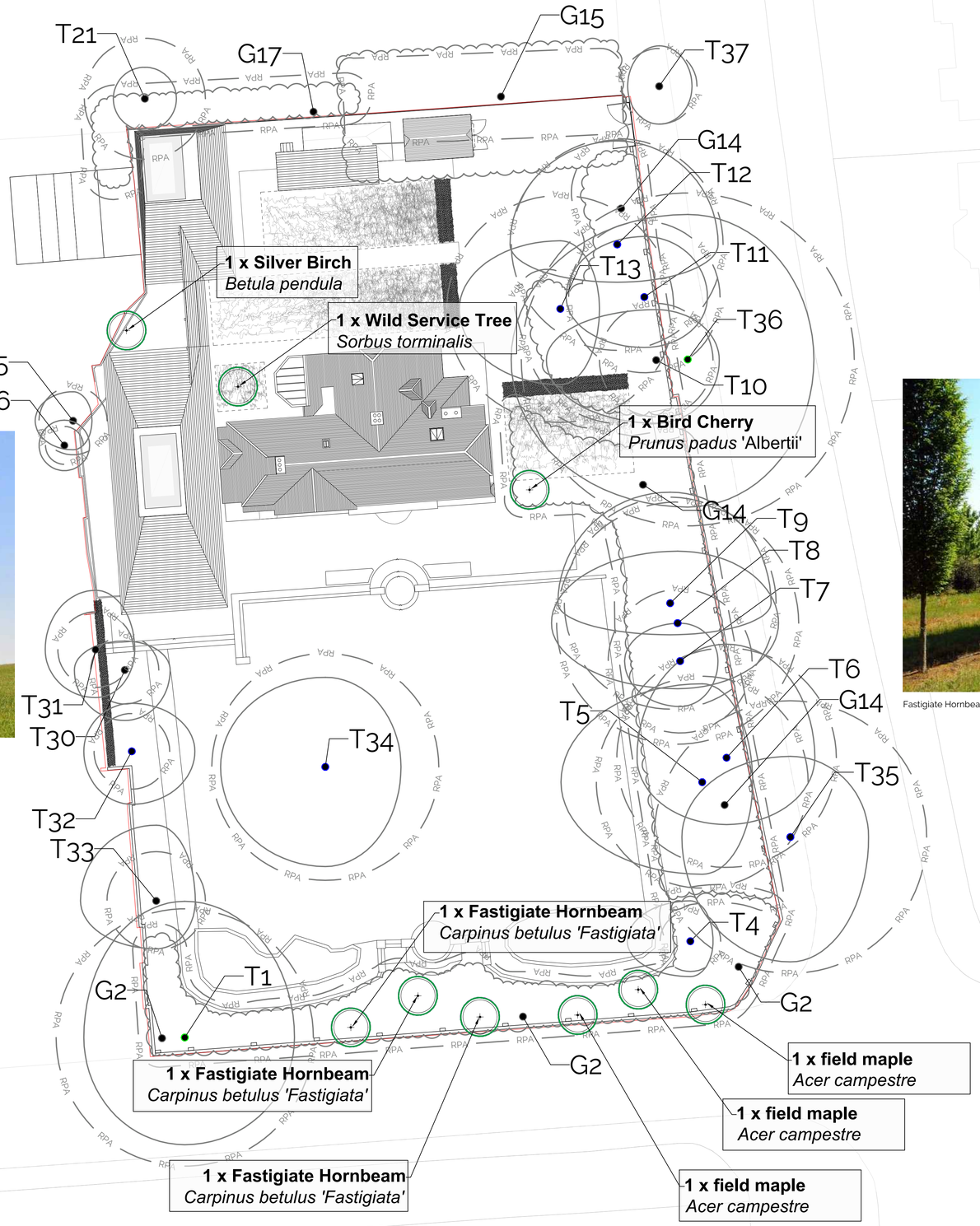
Silver Birch *Betula pendula*



Wild service *Sorbus torminalis*

Bird cherry *Prunus padus* 'Albertii'

Fastigiate Hornbeam *Carpinus betulus 'Fastigiata'*

Field Maple *Acer campestre*

Scale: 1/200 @ A1

N

New Tree Planting

Existing Trees

Canopy Spread (m)
Tree Stem
Root Protection Area (RPA)

New tree planting will be a native species mix to compliment the Conservation Area and nearby Richmond Park.

Trees to be planted at Select Standard (SS)
10-12cm stem girth
2.5-3.5m height

Trees to be planted in accordance with current industry guidelines as per BS 8545: 2014 *Trees - from nursery to independence in the landscape. Recommendations*

Date: May 2021

Client: William Smalley

Project: 264 Sheen Lane, London

Title: Tree Planting Scheme

Map file reference	DWG No
210519 0880 TPS V1a	005 Rev C

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MINERVA MILL | STATION ROAD | ALCESTER | B49 5ET

E. info@wnic.co.uk
T. +44 (0)1789 459458

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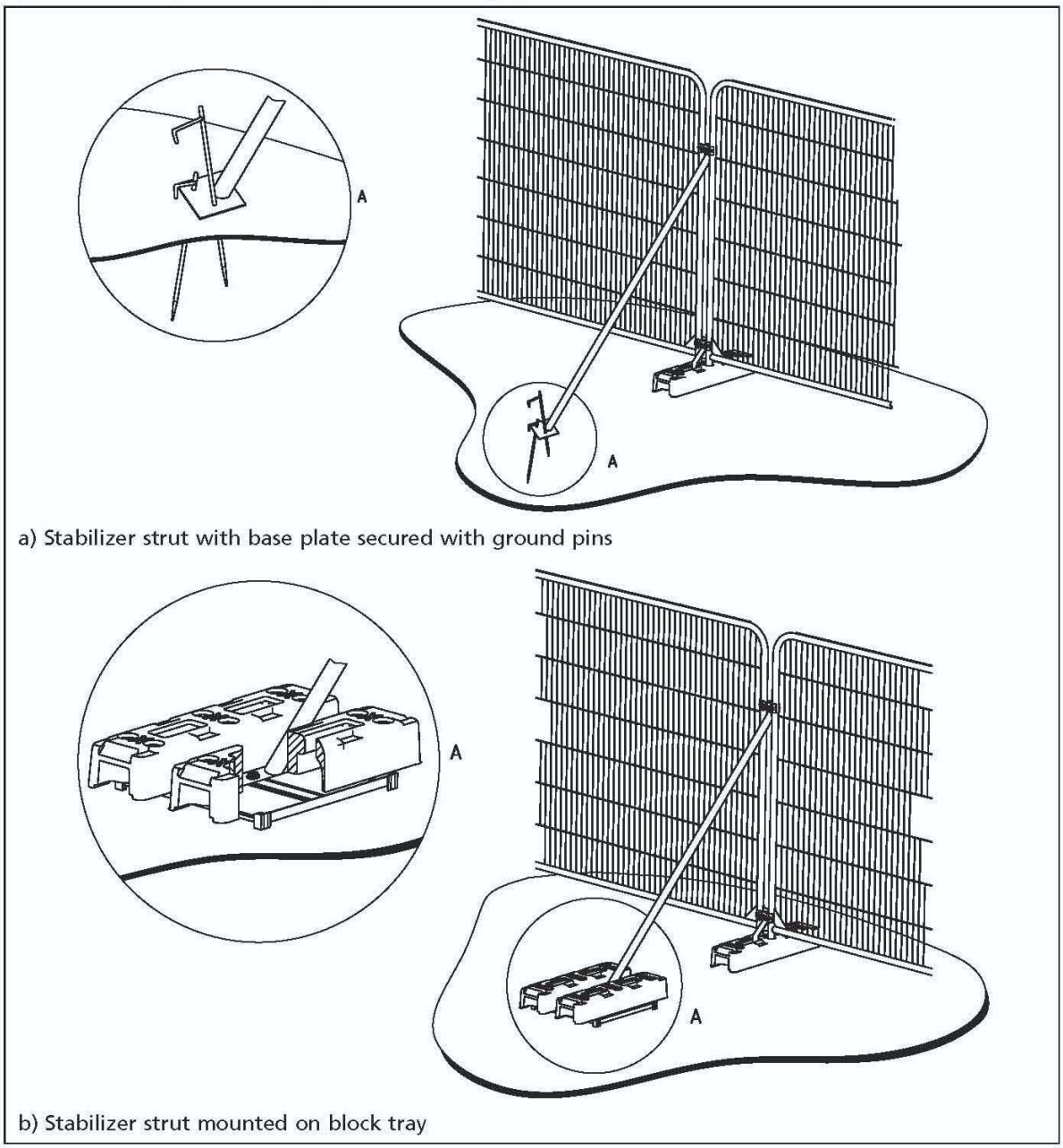
Appendix 5: Tree Protection

Fencing Specification

Figure 3 **Examples of above-ground stabilizing systems**



WHARTON NATURAL INFRASTRUCTURE CONSULTANTS
Minerva Mill
Station Road
Alcester
Warwickshire
B49 5ET

T: 01789 459 458
E: info@wnic.co.uk

WNIC.CO.UK

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