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Arboricultural Implications Report

Proposed re-development at

21 The Avenue

Twickenham



November 2024

Ref. SJA air 23489-01

SUMMARY

S1. On the basis of our assessment, we conclude that the arboricultural impact of this scheme is of low magnitude, as defined according to the categories set out in **Table 1** of this report.

S2. Our assessment of the impacts of the proposals on the existing trees concludes that no mature, trees, no category 'A' or 'B' trees, and no trees of high landscape, townscape, amenity or biodiversity value are to be removed. None of the main arboricultural features of the property, are to be removed. The proposed removal of two small individuals, one small group and a partial removal of one group of trees will represent no alteration to the main arboricultural features of the property, a minor alteration to the overall arboricultural character of the property and will not have a significant adverse impact on the arboricultural character and appearance of the local landscape or the conservation area.

S3. No pruning is proposed to any retained trees or groups.

S4. There will be no incursions into the Root Protection Areas (RPAs) of any of the trees to be retained.

S5. The proposed extension is unlikely to be shaded by retained trees to the extent that this will interfere with their reasonable use or enjoyment by the occupiers, which might otherwise lead to pressure on the Local Planning Authority to permit felling or severe pruning that it could not reasonably resist.

S6. As the proposed development will not result in the removal of trees which are considered to be of townscape or amenity value or important landscape features, or make a positive contribution to the character, appearance or significance of the area it complies with Policies LP16, DM DC4 and DM HD1 of the Richmond Borough Council Core Strategy, Development Management Plan (adopted 2011) and ST MARGRETS Village Planning Guidance (2016) documents.

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1. INTRODUCTION AND BACKGROUND INFORMATION

1.1. Instructions

1.1.1. SJAtrees has been instructed by Mr and Mrs Hardcastle-Jones to visit No. 21 The Avenue, Twickenham and to survey the trees growing on or immediately adjacent to this property.

1.1.2. We are further asked to identify which trees are worthy of retention within a proposed re-development of the property; to assess the implications of the development proposals on these specimens, and to advise how they should be protected from unacceptable damage during construction.

1.2. Scope of report

1.2.1. This report and its appendices reflect the scope of our instructions, as set out above. It is intended to accompany a planning application to be submitted to the London Borough of Richmon-upon-Thames Council (“the LPA”) and complies with local validation requirements.

1.2.2. It complies also with the recommendations of British Standard BS 5837:2012, *Trees in relation to design, demolition and construction – Recommendations* (‘BS 5837’). However, the British Standard is not a Code of Practice that consists of written rules outlining how actions or decision must be taken and it “should not be quoted as if it were a specification¹”; it is a set of recommendations intended to “assist decision-making with regard to existing and proposed trees in the context of design, demolition and construction²”

1.2.3. The proposed development comprises the demolition of an outbuilding with the construction of an extension to the western elevation along with internal renovations.

1.2.4. This report summarises and sets out the main conclusions of the baseline data

¹ British Standard BS 5837:2012. *Trees in relation to design, demolition and construction – Recommendations*; Foreword. The British Standards Institution.

² Ibid., p.1, Introduction.

collected during the tree survey and identifies those trees whose removal could result in a significant adverse impact on the character or appearance of the local area (Section 3). It then details and assesses the impacts of the proposed development on individual trees and groups of trees, including those to be removed (Section 4), those to be pruned (Section 5), those which might incur root damage that might threaten their viability (Section 6) and those that might become under pressure for removal after occupation because of shading or apprehension (Section 7). A summary and conclusions, with regard to local planning policy, are presented in Section 8.

1.3. Site inspection

1.3.1. A site visit and tree inspection were undertaken by Tom Southgate of SJAtrees on Tuesday the 26th of September 2023. Weather conditions at the time were overcast with intermittent rain. Deciduous trees were in full leaf.

1.4. Site description

1.4.1. The property is 0.09ha in size and is located on the north side of The Avenue (A316), forming the southern boundary, as shown at **Figure 1** below. The east and west boundaries adjoin residential properties, also fronting The Avenue. The north boundary adjoins The Lake Grounds private garden.

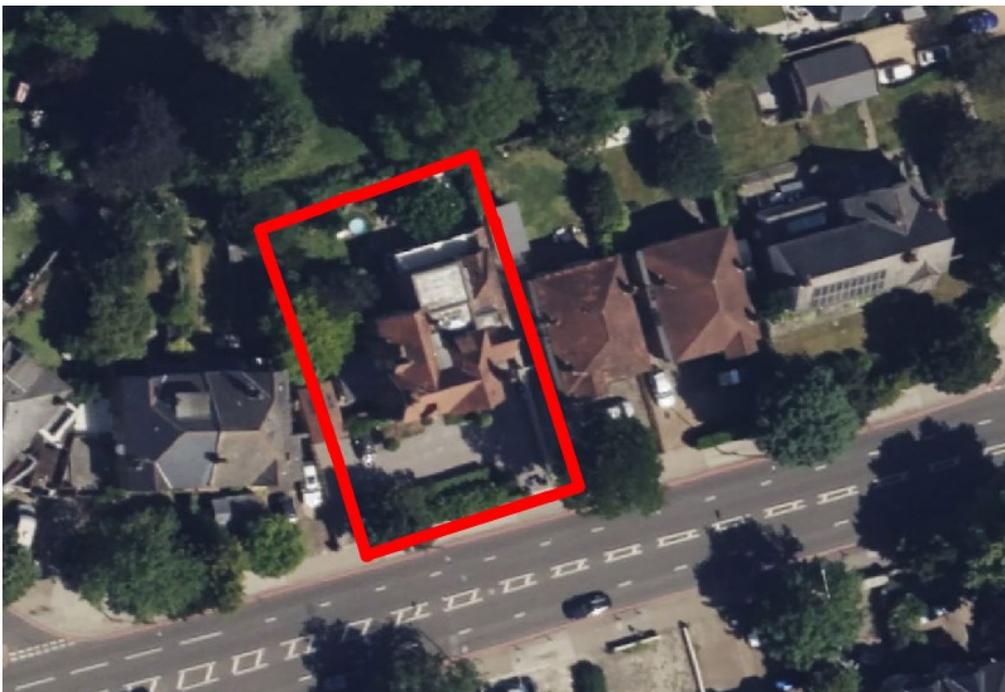


Figure 1: Site location shown on Google aerial image

1.4.2. The site is on relatively level ground that rises by only 0.95m from its northern end, adjacent to The Lake Grounds, to its southern end adjacent to The Avenue, and currently comprises a four-storey dwelling with associated front gravel driveway and rear garden with both a patio and a small lawn area.

1.5. Soil type

1.5.1. The British Geological Survey Solid and Drift Geology map of the area indicates the property overlies superficial deposits of “Kempton Park Gravel Member - Sand and gravel.” above a bedrock of “London Clay Formation - Clay and silt.”

1.5.2. The class of soil in this area is recorded on the Soilscape (England) maps on the Department for Environment, Food & Rural Affairs (‘Defra’) Magic website as a “freely draining slightly acid loamy soil”. The class of soil and the indications of the British Geological Survey map suggest that the soil is unlikely to be highly susceptible to compaction.

1.6. Statutory controls

1.6.1. One of the trees on-site is covered by a tree preservation order (TPO). This is TPO no. T16 of T0142 made by the LPA. The map in the TPO is reproduced at **Figure 2** below and the trees protected by it are identified within the tree survey schedule at **Appendix 3** and on the accompanying tree protection plan.



Figure 2: Extract from the TPO map, showing area of trees covered by the Order

1.6.2. The property is within the boundaries of the St Margrets Conservation Area

(CA19). The Character Appraisal for this area mentions trees at paragraph nine, where it states that **“Throughout the area strong boundary definition is apparent, mostly achieved by low brick walls and hedge planting. Trees in front gardens add further colour, light and shade”**.

1.7. Non-statutory designations

1.7.1. There are no woodlands within or abutting the property that are classified as ‘Ancient’. Ancient woodland is defined as “any area that’s been wooded continuously since at least 1600 AD” and is considered an important and irreplaceable habitat.

1.7.2. There are no trees within or abutting the property that can be classified as ‘Ancient’ or ‘Veteran’. Ancient and veteran trees are also considered to be irreplaceable habitats, and contribute to a site’s biodiversity, cultural and heritage value, and the National Planning Policy Framework (see below) states that development resulting in the loss or deterioration of ancient or veteran trees should be refused, unless there are wholly exceptional reasons and a suitable compensation strategy exists.

2. PLANNING CONTEXT

2.1. Planning history

2.1.1. A review of the planning history of this site on the planning section of the LPA website reveals multiple applications for tree pruning within the past 15 years. Along with applications for minor works such as the construction of a bike shed, driveway resurfacing, brick gate post alteration and the addition of iron gates and security railings (2011 Granted Permission). The most pertinent application within the last 20 years was the **“Erection of a first floor extension with balcony and the consolidation of the existing outbuildings into the ground floor element of the dwelling to provide a kitchen/dining area and a non-self-contained 'granny' annex”**. This application was approved in March 2012.

2.2. Planning policy - national

2.2.1. Under Section 197 of the Town and Country Planning Act 1990, local authorities have a statutory duty to consider the protection and planting of trees when considering planning applications. The effects of proposed development on trees are therefore a material consideration, and this is normally reflected in local planning policies.

2.2.2. The National Planning Policy Framework (‘NPPF’)³ sets out the Government’s planning policies for England and how these should be applied in both plan and decision-making. Paragraph 2 makes it clear that the NPPF is itself a material consideration in the determination of planning application. Paragraph 11 states that **“Plans and decisions should apply a presumption in favour of sustainable development.”**

2.2.3. In paragraph 135, within Section 12 “Achieving well-designed and beautiful places” the NPPF states: **“Planning policies and decisions should ensure that developments:**

³ The National Planning Policy Framework (NPPF) (December 2023). Department for Levelling Up, Housing & Communities

- a) will function well and add to the overall quality of the area, not just for the short term but over the lifetime of the development;**
- b) are visually attractive as a result of good architecture, layout and appropriate and effective landscaping;**
- c) are sympathetic to local character and history, including the surrounding built environment and landscape setting, while not preventing or discouraging appropriate innovation or change (such as increased densities);**
- d) establish or maintain a strong sense of place, using the arrangement of streets, spaces, building types and materials to create attractive, welcoming and distinctive places to live, work and visit;**
- e) optimise the potential of the site to accommodate and sustain an appropriate amount and mix of development (including green and other public space) and support local facilities and transport networks; and**
- f) create places that are safe, inclusive and accessible and which promote health and well-being, with a high standard of amenity for existing and future users; and where crime and disorder, and the fear of crime, do not undermine the quality of life or community cohesion and resilience.”**

2.2.4. Paragraph 136 in this section states: “Trees make an important contribution to the character and quality of urban environments, and can also help mitigate and adapt to climate change. Planning policies and decisions should ensure that new streets are tree-lined, that opportunities are taken to incorporate trees elsewhere in developments (such as parks and community orchards), that appropriate measures are in place to secure the long-term maintenance of newly-planted trees, and that existing trees are retained wherever possible. Applicants and local planning authorities should work with highways officers and tree officers to ensure that the right trees are planted in the right places, and solutions are found that are compatible with highways standards and the needs of different users.”

2.2.5. The section titled “Meeting the challenge of climate change, flooding and coastal change” states at paragraph 158: “Plans should take a proactive approach to mitigating and adapting to climate change, taking into account the long-term implications for flood risk, coastal change, water supply, biodiversity and landscapes, and the risk of overheating from rising temperatures. Policies should support appropriate measures to ensure the future resilience of communities and infrastructure

to climate change impacts, such as providing space for physical protection measures, or making provision for the possible future relocation of vulnerable development and infrastructure.”

2.2.6. In paragraph 180, within Section 15 “Conserving and enhancing the natural environment” the NPPF states: **“Planning policies and decisions should contribute to and enhance the natural and local environment by:**

a) protecting and enhancing valued landscapes, sites of biodiversity or geological value and soils (in a manner commensurate with their statutory status or identified quality in the development plan);

b) recognising the intrinsic character and beauty of the countryside, and the wider benefits from natural capital and ecosystem services – including the economic and other benefits of the best and most versatile agricultural land, and of trees and woodland;

[...] d) minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures;

e) preventing new and existing development from contributing to, being put at unacceptable risk from, or being adversely affected by, unacceptable levels of soil, air, water or noise pollution or land instability. Development should, wherever possible, help to improve local environmental conditions such as air and water quality, taking into account relevant information such as river basin management plans;

2.2.7. In paragraph 186, under the ‘Habitats and biodiversity’ section, the NPPF states: **“When determining planning applications, local planning authorities should apply the following principles:**

c) 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....”

2.3. Regional planning policy

2.3.1. Policy G1 ‘Green infrastructure’ of the London Plan⁴ states:

“A London’s network of green and open spaces, and green features in the built environment, should be protected and enhanced. Green infrastructure should be planned, designed and managed in an integrated way to achieve multiple benefits.

B Boroughs should prepare green infrastructure strategies that identify opportunities for cross-borough collaboration, ensure green infrastructure is optimised and consider green infrastructure in an integrated way as part of a network consistent with Part A.

C Development Plans and area-based strategies should use evidence, including green infrastructure strategies, to:

- 1) identify key green infrastructure assets, their function and their potential function**
- 2) identify opportunities for addressing environmental and social challenges through strategic green infrastructure interventions.**

D Development proposals should incorporate appropriate elements of green infrastructure that are integrated into London’s wider green infrastructure network.”

2.3.2. Policy G7 ‘Trees and woodlands’ of the London Plan states:

“A London’s urban forest and woodlands should be protected and maintained, and new trees and woodlands should be planted in appropriate locations in order to increase the extent of London’s urban forest – the area of London under the canopy of trees.

B In their Development Plans, boroughs should:

- 1) protect ‘veteran’ trees and ancient woodland where these are not already part of a protected site¹³⁹**
- 2) identify opportunities for tree planting in strategic locations.**

C Development proposals should ensure that, wherever possible, existing trees of value are retained.¹⁴⁰ If planning permission is granted that necessitates the removal of trees there should be adequate replacement based on the existing value of the benefits

⁴ The London Plan (March 2021); Greater London Authority

of the trees removed, determined by, for example, i-tree or CAVAT or another appropriate valuation system. The planting of additional trees should generally be included in new developments – particularly large-canopied species which provide a wider range of benefits because of the larger surface area of their canopy.

¹⁴⁰ **Category A, B and lesser category trees where these are considered by the local planning authority to be of importance to amenity and biodiversity, as defined by BS 5837:2012”.**

2.4. Local planning policy

2.4.1. Local planning policies are contained in the Richmond Borough Council Core Strategy (2018).

2.4.2. The relevant section of Policy LP16 of the Core Strategy states:

“B. To ensure development protects, respects, contributes to and enhances trees and landscapes, the Council, when assessing development proposals, will: [...]

2. resist development which results in the damage or loss of trees that are considered to be of townscape or amenity value; the Council will require that site design or layout ensures a harmonious relationship between trees and their surroundings and will resist development which will be likely to result in pressure to significantly prune or remove trees;”

2.4.3. The LPA has prepared a Supplementary Planning Document (SPD) dealing with the protection of trees on development sites, titled Development Management Plan (adopted 2011).

2.4.4. Policy DM DC 4 of this document states:

“The boroughs trees and landscape will be protected and enhanced by: [...]

requiring landscape proposals in submissions for new development, which retain existing trees and other important landscape features where practicable and include new trees and other planting. Where trees are removed, appropriate replacement planting will normally be required. There will be a presumption against schemes that result in a significant loss of trees, unless replacements are proposed and there is good reason such as the health of the trees, public amenity, street scene or restoration of an historic garden.”

2.4.5. The guidance presented in this document has been closely followed in the preparation of this report.

2.4.6. Additionally, the LPA have produced a further SPD titled ST MARGRETS Village Planning Guidance (2016). DMP Policy DM HD 1 (Conservation areas – designation, protection and enhancement) of this document states:

“Buildings or parts of buildings, street furniture, trees and other features which make a positive contribution to the character, appearance or significance of the area should be retained.”

2.5. Neighbourhood planning policy

2.5.1. At the time of writing there is no Neighbourhood Plan covering the area within which the property is found.

3. THE TREES

3.1. Survey findings

3.1.1. We surveyed 13 individual trees, and four groups of trees growing within or immediately adjacent to the property. Their details can be found in the tree survey schedule at **Appendix 2**.

3.1.2. The arboricultural quality of the property is dominated by broad leaved specimens with only 23% of the trees surveyed individually being coniferous. Most of the trees are also of non-native species, with only 31% of trees surveyed individually being native. Almost all the trees within the property have been planted.

3.1.3. The most frequently occurring species within and adjacent to the property are yew and holm oak. However, as these specimens are no higher than 7m tall, they do not dominate the property. Instead, the front garden is dominated by yew tree (no. 8) and in the rear garden by a cider gum (no. 3). All trees surveyed individually within the property are of semi-mature age.

3.2. Assessment of suitability for retention

3.2.1. As noted above in Section 2.3, local planning policies require the retention of trees that are of “**townscape or amenity value.**” The individuals within or adjacent to the property, whose attributes we consider meet these criteria, are as follows:

- The street side yew and beech trees (nos. 8 & 9), both on and off-site, and readily visible from The Avenue (A316);
- The off-site trees located within the private amenity area to the north of the dwelling known as ‘The Lake Grounds’ which form an established treeline, visible in between dwellings and above their roofline in from The Avenue.

3.2.2. One individual tree (no. 9) is unsuitable for retention, irrespective of the proposals, in that it is in such a condition that it cannot realistically be retained as a living tree in the context of the current land use for longer than 10 years. However, as this tree is off-site there are no proposals to show its removal. Furthermore, this tree is covered by a TPO and any proposed works would need to be consented to by the

local authority. As this tree has been assessed as category 'U' it is indicated on the accompanying tree protection plan by **bracketed red** numbers.

3.2.3. There are two mature trees growing immediately adjacent to the site; one of these (no. 9) as identified above is a category 'U' specimen. The other, a walnut tree (no. 2) is located within 'The Lake Grounds' amenity space to the north and is only visible in a narrow view between Nos. 21 and 23 The Avenue, but being part of the mature established tree line of the amenity space does contribute to the townscape.

3.2.4. There are no category 'A' trees and 1 category 'B' specimen, (walnut no. 2). The remaining 11 trees are assessed as category 'C' trees, being either of low quality, very limited merit, only low landscape benefits, no material cultural or conservation value, or only limited or short-term potential; or young trees with trunk diameters below 150mm; or a combination of these.

3.2.5. Of the groups of trees, none have been assessed as category 'A' or category 'B'. All four have been assessed as category 'C'.

3.3. Assessment of arboricultural impacts

3.3.1. The arboricultural impacts of the proposed site layout by MJA Architects, drawing no. 1964.03.03.Pln01.022 have been assessed by overlaying this onto the TCP and are discussed in the following sections of this report and are shown on the tree protection plan (TPP) presented at **Appendix 4**.

3.3.2. The TPP identifies the trees to be removed to accommodate the proposed development, either because they are situated within the footprints of proposed structures or surfaces, or because in our judgment they are too close to these structures or surfaces to enable them to be retained. These are shown by means of **red crosses** on the TPP.

3.3.3. The TPP also shows how trees to be retained will be protected from damage during construction, and the measures identified are set out and described in the outline arboricultural method statement at **Appendix 2** of this report. The implementation of, and adherence to, these measures can readily be secured by the imposition of appropriate planning conditions.

3.3.4. Details of the impacts identified within these categories, and our assessment

of their respective significance, are analysed in Sections 4 to 6 below.

3.3.5. Based on these findings, we have assessed the magnitude of the overall arboricultural impact of the proposals according to the categories defined in **Table 1** below.

Impact	Description
High	Total loss of or major alteration to main elements/ features/ characteristics of the baseline, post-development situation fundamentally different
Medium	Partial loss of or alteration to main elements/ features/ characteristics of the baseline, post-development situation will be partially changed
Low	Minor loss of or alteration to main elements/ features/ characteristics of the baseline, post-development changes will be discernible but the underlying situation will remain similar to the baseline
Negligible	Very minor loss of or alteration to main elements/ features/ characteristics of the baseline, post-development changes will be barely discernible, approximating to the 'no change' situation

Table 1: Magnitude of impacts⁵

⁵ Determination of magnitude based on DETR (2000) Guidance on the Methodology for Multi-Modal Studies, as modified and extended.

4. TREES TO BE REMOVED

4.1. Details

4.1.1. To accommodate the proposed development, as shown on the proposed layout plan, two individual trees and one group (nos. 3, 4 & G3) are to be removed; one group (G2) is to be partially removed. This is because these trees are either situated within the footprints of proposed structures or surfaces, or because they are too close to these to enable them to be retained.

4.1.2. Details of the trees to be removed, including their dimensions, age class and British Standard categorisation, are shown and listed on the TPP and at **Table 2** below.

Tree no.	Species	Height	Trunk diameter	Age class	BS category
3	Cider gum	10m	345mm	Semi-mature	C (1)
4	Honey locust	10m	280mm	Semi-mature	C (1)
G2	Various	10m	Max 140mm Avg. 100mm	Young	C (1)
G3	Various	4m	Max 3 stems @ 100mm	Semi-mature	C (1)

Table 2: Trees/Groups to be removed

4.2. Assessment

4.2.1. All those trees or groups of trees that constitute the main arboricultural features of the property and which make the greatest contribution to the character and appearance of the local landscape, to amenity or to biodiversity (see paragraph 3.2.1), will be retained.

4.2.2. None of the trees to be removed are mature specimens of species of large ultimate size: all the other trees to be cleared are young, semi-mature or of small ultimate size. The significance of this is threefold. Firstly, for obvious reasons mature trees tend to be larger in size and therefore are likely to be more visible and to make a greater contribution to the landscape. Secondly, mature trees are more likely to have formed associations with wildlife and to support other flora or fauna (for example, young trees infrequently contain splits, cracks or cavities that might provide roosting sites for bats); and thirdly, mature trees have a significantly greater capacity than

smaller trees to actively sequestrate and store carbon⁶.

4.2.3. The two individual trees to be removed are the Cider gum (no. 3) and the honey locust (no. 4). Both trees have recently been pruned, as seen in **Images 1 & 2** below, reducing their heights, spreads and overall contribution to the street scene, in the narrow-glimpsed view from The Avenue.



Images 1 & 2: Left – cider gum no. 3; Right – honey locust no. 4

4.2.4. Both individuals are no taller than 10m and are located 29m & 25m north of The Avenue, from where they are glimpsed in a narrow 10m wide view between existing dwellings Nos. 19 & 21. Whilst they are visible in this narrow-glimpsed view, the trees are set against the taller, mature and established backdrop of trees growing off-site and within the private amenity space to the north, known as ‘The Lake Grounds’. The trees within the grounds form a more significant arboricultural backdrop and feature in views from The Avenue. As such, the removal of trees nos. 3 & 4 will not have a significant or detrimental impact on the amenity of the townscape, which will ultimately remain unchanged.

⁶ Stephenson N. L., Das A. J., Zavala M. A. (2014) Rate of tree carbon accumulation increases continuously with tree size. *Nature*, volume 507.

4.2.5. Two of the eleven category 'C' trees on site are to be removed: these are either of low quality, low value, or short-term potential. For these reasons, their removal will have no significant impact on the character or appearance of the area.

4.2.6. The proposals incorporate replacement tree hedge planting; this is shown on the plans submitted with the application and includes areas of pleached hedge planting of beech, along the west and east boundaries which will be included in a planting plan submitted as part of the application. Along with the trees retained in front gardens along The Avenue, which add further colour, light and shade, this will mitigate the proposed removals, improve the age class balance of the trees on site, and re-establish a framework for the ongoing and long-term character of the site.

4.2.7. In the light of these considerations, and taking account of the numbers, sizes and locations of the trees to be retained, including those that are off-site, the felling of the trees and groups identified for removal will represent no alteration to the main arboricultural features of the site.

5. TREES TO BE PRUNED

5.1. Details

5.1.1. None of the trees to be retained are to be pruned to facilitate implementation of the proposals.

5.2. Assessment

5.2.1. As no trees are to be pruned, and the proposed extension is no closer than 7.3m from the extents of the canopies of trees to be retained, there will be adequate working space for construction close to trees, and a reasonable margin of clearance for future growth.

6. ROOT PROTECTION AREA INCURSIONS

6.1. Details

6.1.1. No parts of the proposed extension or associated works are within the RPAs of any of the trees to be retained.

6.2. Assessment

6.2.1. As no parts of the proposed extension or other structures abut or are within the RPAs of any of the trees to be retained, subject to the implementation of protective measures specified on the TPP, their construction will not cause unacceptable damage to roots or rooting environments as a result of root severance or damage, or compaction or pollution of the soil.

6.2.2. Implementation of measures to prevent other incursions into the RPAs of retained trees and to protect them during construction can be assured by the erection of appropriate protective fencing, as shown on the TPP at **Appendix 4**.

6.2.3. Accordingly, subject to implementation of the above measures, and considering the ages, current physiological condition and tolerance of disturbance of these retained trees, no significant or long-term damage to their root systems or environments will occur as a result of the proposed development.

7. RELATIONSHIP OF RETAINED TREES TO NEW DWELLINGS

7.1. Shading

7.1.1. The proposed extension does not fall within the shadow patterns⁷ of retained trees. As no windows of the proposed extension lie within the shadow patterns of any retained trees, it will not be shaded by to the extent that this will interfere with its reasonable use or enjoyment by the occupiers; which might otherwise lead to pressure to permit felling or severe pruning that the LPA could not reasonably resist.

⁷ BS 5837:2012, 5.2.2, Note 1: "An indication of potential direct obstruction of sunlight can be illustrated by plotting a segment, with a radius from the centre of the stem equal to the height of the tree, drawn from due north-west to due east, indicating the shadow pattern through the main part of the day."

8. CONCLUSIONS

8.1. Summary

8.1.1. Our assessment of the impacts of the proposals on the existing trees concludes that no mature trees, no category 'A' or 'B' trees, and no trees of high landscape, townscape, amenity or biodiversity value are to be removed. None of the main arboricultural features of the property, are to be removed. The proposed removal of two small individuals, one small group and a partial removal of one group of trees will represent no alteration to the main arboricultural features of the property, a minor alteration to the overall arboricultural character of the property and will not have a significant adverse impact on the arboricultural character and appearance of the local landscape or the conservation area.

8.1.2. No pruning is proposed to any retained trees or groups.

8.1.3. There will be no incursions into the Root Protection Areas (RPAs) of any of the trees to be retained.

8.1.4. The proposed extension is unlikely to be shaded by retained trees to the extent that this will interfere with their reasonable use or enjoyment by the occupiers, which might otherwise lead to pressure on the Local Planning Authority to permit felling or severe pruning that it could not reasonably resist.

8.2. Compliance with national planning policy

8.2.1. As the proposals will retain all the main arboricultural features of the property, its arboricultural attractiveness, history and landscape character and setting will be maintained, thereby complying with Paragraph 130 of the National Planning Policy Framework.

8.2.2. Whilst two small trees are to be removed, there is no duty in planning policy to retain all existing trees in all circumstances. Paragraph 131 of the NPPF states (*italics added for emphasis*): “**Planning policies and decisions should ensure... that existing trees are retained wherever possible**”; and thereby recognises circumstances in which it might not be possible to retain every tree. Accordingly, the proposed

removal of trees does not mean that this application must thereby be refused; and does not mean it conflicts with Paragraph 131 of the NPPF.

8.2.3. The proposals do not necessitate the removal of any mature trees of large ultimate size, which make the greatest contribution to carbon sequestration and storage, surface water run-off, biodiversity and landscape and air temperature and cleanliness; for all of which, appropriate space for their retention is provided. Accordingly, insofar as this relates to existing trees, the scheme can be seen to have taken a proactive approach to mitigating climate change and thereby complies with Paragraph 153 of the National Planning Policy Framework.

8.2.4. As the proposals will not result in the loss or deterioration of any ancient woodland or any ancient or veteran trees, they comply with paragraph 180 (c) of the NPPF.

8.3. Compliance with regional planning policy

8.3.1. As all of the existing trees assessed as being features in the existing built environment will be retained, in arboricultural terms the proposed development complies with Policy G1 'Green infrastructure' of the London Plan.

8.3.2. As all trees of significant value and importance to amenity will be retained, the proposed development will protect, maintain and enhance the main arboricultural features of the property. As such, it complies with Policy G7 'Trees and woodlands' of the London Plan.

8.3.3. As the first sentence of section C of Policy G7 of the London Plan states **"Development proposals should ensure that, wherever possible, existing trees of value are retained"**, it is acknowledged (by the words "wherever possible") that there can be cases where the retention of trees of value is not possible. Accordingly, in this case, where it has not been possible to retain every tree of value in the development proposal, there remains no breach of Policy G7.

8.3.4. The second sentence of section C of Policy G7 requires that **"[i]f planning permission is granted that necessitates the removal of trees there should be adequate replacement based on the existing values of the trees removed"**. Consequently, the policy test is not to replace trees to be removed with "better" trees, trees of the same

age or size, or more trees (although the planting of “additional trees” is generally encouraged in a proposal for development *overall* by the third sentence of section C); there will be compliance with Policy G7 if “adequate” replacements are proposed for trees to be removed. What constitutes an “adequate” replacement is a matter of planning judgment, not science; and in this case we conclude that the proposed replacement planting meets this description.

8.4. Compliance with local planning policy

8.4.1. As the proposed development will not result in the removal of trees which are considered to be of townscape or amenity value or important landscape features, or make a positive contribution to the character, appearance or significance of the area it complies with Policies LP16, DM DC4 and DM HD1 of the Richmond Borough Council Core Strategy, Development Management Plan (adopted 2011) and ST MARGRETS Village Planning Guidance (2016) documents.

8.5. Conclusion

8.5.1. On the basis of our assessment, we conclude that the arboricultural impact of this scheme is of low magnitude, as defined according to the categories set out in **Table 1** of this report.

APPENDIX 1

Methodology

A1.1. Tree survey and baseline information

A1.1.1. We surveyed individual trees with trunk diameters of 75mm and above⁸, trees with trunk diameters of 150mm and above growing in groups or woodlands, and shrub masses, hedges and hedgerows⁹ growing within or immediately adjacent to the property; and recorded their locations, species, dimensions, ages, condition, and visual importance in accordance with BS 5837 recommendations.

A1.1.2. The baseline information collected during the site survey was recorded on site using a hand-held digital device. This information was then imported into an Excel spreadsheet and used to produce the tree survey schedule at **Appendix 3**. The numbers assigned to the trees in the tree survey schedule correspond with those shown on the appended tree protection plan.

A1.1.3. We surveyed trees as groups where they have grown together to form cohesive arboricultural features, either aerodynamically (trees that provide companion shelter), visually (e.g., avenues or screens) or culturally¹⁰. However, where it might be necessary to differentiate between specific trees within these groups, we also surveyed these individually.

A1.1.4. We inspected the trees from the ground only, aided by binoculars as appropriate, but did not climb them. We took no samples of wood, roots or fungi. We did not undertake a full hazard or risk assessment of the trees, and therefore can give no guarantee, either expressed or implied, of their safety or stability.

A1.1.5. Whilst we categorised the trees in accordance with BS 5837 (details of the criteria used for this process can be found in the notes that accompany the tree survey schedule), we assessed the trees' suitability for retention against national, regional and local planning policies. We applied this methodology in line with the NPPF's presumption in favour of sustainable development, giving greater weighting to the contribution of a tree to the character and appearance of the local landscape, to amenity, or to biodiversity, where its removal might have a significant adverse impact on these factors.

A1.2. Tree constraints

A1.2.1. In line with the NPPF's presumption in favour of sustainable development, we assessed whether any trees should be retained in the context of the proposed re-development. Our assessment of which trees might have to be retained, and which can be removed, is based on:

A1.2.2. whether any trees are classed as 'ancient' or 'veteran', and thereby are designated as 'irreplaceable habitats';¹¹

A1.2.3. which trees contribute to local character and history, including to the surrounding landscape setting; which trees contribute to biodiversity; and which trees

⁸ BS 5837, paragraph 4.2.4 b), recommends that all trees over 75mm stem diameter should be included in a pre-planning land and tree survey.

⁹ Ibid., 4.4.2.7

¹⁰ Ibid., 4.4.2.3

¹¹ The National Planning Policy Framework (NPPF) (July 2021). Paragraph 180 (c).

help mitigate and adapt to climate change; and whose removal would thereby be unlikely to comply with national planning policy guidance;

A1.2.4. which trees are important townscape amenity or form important landscape features, or make a positive contribution to the character, appearance or significance of an area, such that their removal would be contrary to local planning policies: specifically, Policy LP16, DM DC4 and DM HD1 of the Richmond Borough Council core strategy, development management plan and St. Margarets village planning guidance, as set out above;

A1.2.5. our assessment of the tree's' quality, value and remaining life expectancy, in accordance with BS5837:2012, as summarised in the notes that accompany the tree survey schedule.

A1.2.6. As trees growing outside the boundaries of the site are in the control of others, we have assumed they will be retained, irrespective of their size, age or condition.

A1.2.7. Whilst we have categorised trees in accordance with BS 5837, we have not used these categorisations as the main criterion of whether specimens might be removed or should be retained. Trees in categories 'A', 'B' and 'C' are all a material consideration in the development process; but the retention of category 'C' trees, being of low quality or of only limited or short-term potential, will not normally be considered necessary should they impose a significant constraint on development.

A1.2.8. Furthermore, BS 5837 makes it clear that young trees, even those of good form and vitality, which have the potential to develop into quality specimens when mature "**need not necessarily be a significant constraint on the site's potential**"¹².

A1.2.9. Moreover, BS 5837 states that "**.... care should be taken to avoid misplaced tree retention; attempts to retain too many or unsuitable trees on a site can result in excessive pressure on the trees during demolition or construction work, or post-completion demands for their removal**"¹³.

A1.2.10. The 'Root Protection Areas' (RPAs)¹⁴ of the trees identified for retention were calculated in accordance with Section 4.6 of BS 5837; and were assessed taking account of factors such as the likely tolerance of a tree to root disturbance or damage, the morphology and disposition of roots as influenced by existing site conditions (including the presence of existing roads or structures), as well as soil type, topography and drainage. Where considered appropriate, the shapes of the RPAs (although not their areas) were modified based on these considerations, so that they reflect more accurately the likely root distribution of the relevant trees.

A1.2.11. To assess whether the trees identified for retention would be in a sustainable relationship with the proposed development (without casting excessive shade or otherwise unreasonably interfering with incoming residents' prospects of enjoying their properties, and thereby leading inevitably to requests for consents to fell), we plotted a segment or "shading arc" from each trunk, with a radius equal to

12 BS 5837, 4.5.10.

13 Ibid., 5.1.1.

14 Ibid., paragraph 3.7. "The minimum area around a retained 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."

the current height of the tree concerned, from due north-west to due east. This gave an indication of potential direct obstruction of sunlight and the shadow pattern cast through the main part of the day¹⁵.

A1.2.12. Based on these principles and recommendations, the tree survey and assessment of suitability for retention informed the production of a tree constraints plan (TCP) which indicates the most suitable trees for retention, and their associated below-ground and above-ground constraints.

A1.2.13. As a design tool, the TCP also indicates how close to those trees selected for retention the proposed development could be positioned, in terms of three key criteria:

- a). avoidance of unacceptable root damage;
- b). avoidance of the necessity for unacceptable pruning works; and
- c). avoidance of future felling or pruning works to prevent unacceptable shading or apprehension on behalf of the occupants.

A1.2.14. The TCP was then used to inform the siting of the proposed extension and external works, about both of which we were consulted on several occasions during the design process. In this way, it has been ensured that the existing trees have made a significant contribution to the design of the proposed development, rather than the design having dictated which trees are to be removed.

15 Ibid., paragraph 5.2.2 Note 1.

APPENDIX 2

Outline Arboricultural Method Statement

A2.1. Tree Protection Plan

A2.1.1. The TPP at Appendix 4 shows the general and specific provisions to be taken during construction of the proposed development, to ensure that no unacceptable damage is caused to the root systems, trunks or crowns of the trees identified for retention. These measures are indicated by coloured notations in areas where construction activities are to occur either within, or in proximity to, retained trees, as described in the relevant panels on the drawing.

A2.2. Pre-start meeting

A2.2.1. Prior to the commencement of any site clearance, ground preparation, demolition or construction works the developer will convene a pre-start site meeting. This shall be attended by the developer's contract manager or site manager, the demolition contractor, the fencing/boarding contractor, the groundwork contractor(s) and the arboricultural consultant. The LPA tree officer will be invited to attend. If appropriate, the tree felling/surgery contractor should also attend. At that meeting contact numbers will be exchanged, and the methods of tree protection shall be fully discussed, so that all aspects of their implementation and sequencing are made clear to all parties. Any clarifications or modifications to the TPP required as a result of the meeting shall be circulated to all attendees.

A2.3. Site clearance

A2.3.1. No clearance of trees or other vegetation shall be undertaken until after the pre-start meeting and after the erection of the tree protection fencing (see below). If any vegetation clearance is required behind the line of the protection fencing this will be made clear at the pre-start meeting and arrangements will be made to do this prior to the fencing's erection, under the supervision of the arboricultural consultant, who will ensure it doesn't cause any soil compaction or damage to the roots of trees to be retained.

A2.3.2. Except where within the RPAs of trees to be retained, all trees and other vegetation to be removed may be cut down or grubbed out as appropriate; but within the RPAs of trees to be retained, trees and vegetation will be cut by hand to ground level and stumps will be either left in place or ground out with a lightweight self-powered stump grinding machine. No excavators, tractors or other vehicles will enter the RPAs.

A2.4. Ground preparation and demolition

A2.4.1. No ground preparation or excavation of any kind, including topsoil stripping or ground levelling, shall be undertaken until after the pre-start meeting and after the erection of the tree protection fencing (see below).

A2.4.2. Demolition of existing buildings and removal of existing areas of hard surfacing that abut or overlie RPAs will be undertaken with care, under the control and supervision of an appointed arboricultural consultant, to ensure that the adjacent soil is not unacceptably excavated, disturbed or compacted.

A2.5. Tree protection fencing

A2.5.1. Construction exclusion zones (CEZs) will be formed by erecting protective fencing around the RPAs of all on-site trees to the specification recommended in BS 5837, Section 6.2, prior to the commencement of construction. This will be at least 2.1m in height, comprising welded mesh panels; every other one braced with a 45°

strut that is pinned to the ground; and seated in concrete or plastic bases pinned to the ground by scaffold uprights sunk to a minimum depth of 600mm, as shown in **Figure 3** of that document. Individual panels will be fixed to each other with at least two clamps, one of which will be a security clamp. "**TREE PROTECTION ZONE - KEEP OUT**" or similar notices will be attached with cable ties to every third panel.

A2.5.2. The RPAs of the off-site trees will also be enforced by the erection of protective fencing to the same specification, prior to the commencement of construction, thereby safeguarding them from incursions by plant or machinery, storage and mixing of materials, or other construction-related activities which could have a detrimental effect on their root systems.

A2.5.3. The recommended positions of the protective fencing are shown by **bold blue lines** on the TPP. The precise positioning of the fencing around the trees will be considered in conjunction with any other protective hoarding/fencing which may be required around the site boundary.

A2.5.4. Within the CEZs safeguarded by the protective fencing, there will be no changes in ground levels, **no soil stripping**, and no plant, equipment, or materials will be stored. Oil, bitumen, diesel, and cement will not be stored or discharged within 10m of any trees. Areas for the storage or mixing of such materials will be agreed in advance and be clearly marked. No notice boards, or power or telephone cables, will be attached to any of the trees. No fires will be lit within 10m of any part of any tree.

A2.6. Ground protection

A2.6.1. To allow space for construction and protection from soil compaction where proposed structures are in close proximity to RPAs of trees to be retained, the ground between the protective fencing and the footprints of the proposed structures will be covered by appropriate ground boarding, in accordance with the guidelines of Section 6.2.3.3 of BS 5837. The locations where these measures will be required are marked by **pink hatching** on the TPP.

A2.6.2. In this instance, the existing compacted gravel access drive and parking area fronting on to The Avenue will be retained. If any areas within the RPAs of retained trees (specifically yew no. 8 and off-site beech no. 9) are to be used for the mixing or storage of materials, it will be ground protected by the installation of interlocking plastic tread boards ("Ground-Guards" or similar), secured to the ground.

APPENDIX 3

Tree Survey Schedule



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(Operations)

Preliminary Tree Survey Schedule

21 The Avenue, Twickenham

November 2024

SJA tss 24428-01

Tree Survey Schedule: Explanatory Notes

21 The Avenue, Twickenham

This schedule is based on a tree inspection undertaken by Tom Southgate of SJA trees (the trading name of Simon Jones Associates Ltd.), on Tuesday the 26th of September 2023. Additionally a further visit was undertaken by Tom Southgate on the 8th of November 2024. Weather conditions during both visits were overcast with intermittent rain. Deciduous trees were in full leaf in September 2023 and in partial leaf in November 2024.

The information contained in this schedule covers only those trees that were examined, and reflects the condition of these specimens at the time of inspection. We did not have access to the trees from any adjacent properties; observations are thus confined to what was visible from within the site and from surrounding public areas.

The trees were inspected from the ground only and were not climbed, and no samples of wood, roots or fungi were taken. A full hazard or risk assessment of the trees was not undertaken, and therefore no guarantee, either expressed or implied, of their safety or stability can be given.

Trees are dynamic organisms and are subject to continual growth and change; therefore the dimensions and assessments presented in this schedule should not be relied upon in relation to any development of the site for more than twelve months from the survey date.

1. Tree no.

Given in sequential order, commencing at "1".

2. TPO no.

Number assigned to tree in the London Borough of Richmond upon Thames Tree Preservation Order no. T0142, as shown in the TPO schedule and plan.

3. Species.

'Common names' are given, taken from MITCHELL, A. (1978) A Field Guide to the Trees of Britain and Northern Europe.

4. Height.

Estimated with the aid of a hypsometer, given in metres.

5. Trunk diameter.

Trunk diameter measured at approx. 1.5m above ground level; or where the trunk forks into separate stems between ground level and 1.5m, measured at the narrowest point beneath the fork. Given in millimetres.

6. Radial crown spread.

The linear extent of branches from the base of the trunk to the main cardinal points, rounded up to the closest half metre, unless shown otherwise. For small trees with reasonably symmetrical crowns, a single averaged figure is quoted.

7. Crown break.

8. Crown clearance.

Distance from adjacent ground level to lowest part of lowest branch, in metres.

9. Age class.

Young: Seedling, sapling or recently planted tree; not yet producing flowers or seeds; strong apical dominance.

Semi-mature: Trunk often still smooth-barked; producing flowers and/or seeds; strong apical dominance, not yet achieved ultimate height.

Mature: Apical dominance lost, tree close to ultimate height.

Over-mature: Mature, but in decline, no crown retrenchment

Veteran: Mature, with a large trunk diameter for species; but showing signs of veteranisation, irrespective of actual age, with decay or hollowing, a crown showing retrenchment and a structure characteristic of the latter stages of life.

Ancient: Beyond typical age range and with a very large trunk diameter for species; with extensive decay or hollowing, a crown that has undergone retrenchment and a structure characteristic of the latter stages of life.

10. Physiology.

Health, condition and function of the tree, in comparison to a normal specimen of its species and age.

11. Structure.

Structural condition of the tree – based on both the structure of its roots, trunk and major stems and branches, and on the presence of any structural defects or decay.

Good: No significant morphological or structural defects, and an upright and reasonably symmetrical structure.

Moderate: No significant pathological defects, but a slightly impaired morphological structure; however, not to the extent that the tree is at immediate or early risk of collapse.

Indifferent: Significant morphological or pathological defects; but these are either remediable or do not put the tree at immediate or early risk of collapse.

Poor: Significant and irreparable morphological or pathological defects, such that there may be a risk of failure or collapse.

Hazardous: Significant and irreparable morphological or pathological defects, with a risk of imminent collapse.

12. Comments.

Where appropriate comments have been made relating to:

- Health and condition
- Safety, particularly close to areas of public access
- Structure and form
- Estimated life expectancy or potential
- Visibility and impact in the local landscape

13. Category.

Based on the British Standard "Trees in relation to design, demolition and construction - Recommendations", BS 5837: 2012; adjusted to give a greater weighting to trees that contribute to the character and appearance of the local landscape, to amenity, or to arboricultural biodiversity.

Category U: Trees 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) Trees that have a serious, irreparable, 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).
- (2) Trees that are dead or are showing signs of significant, immediate, and irreversible overall decline.
- (3) 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.

Category A: Trees of high quality with an estimated remaining life expectancy of at least 40 years.

- (1) Trees that are particularly good examples of their species, especially if rare or unusual.
- (2) Trees, groups or woodlands of particular visual importance as arboricultural and/or landscape features.
- (3) Trees, groups or woodlands of significant conservation, historical, commemorative or other value.

Category B: Trees of moderate quality with an estimated remaining life expectancy of at least 20 years.

- (1) 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 minor 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.
- (2) Trees present in numbers, usually growing as groups or woodlands, such that they form distinct landscape features, thereby attracting a higher collective rating than they might as individuals; or trees present in numbers but situated so as to make little visual contribution to the wider locality.
- (3) Trees with material conservation or other cultural value.

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 150mm.

- (1) Unremarkable trees of very limited merit or of such impaired condition that they do not qualify in higher categories.
- (2) 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 landscape benefits.
- (3) Trees with no material limited conservation or other cultural value.

TREE SURVEY SCHEDULE

21 The Avenue, Twickenham

No.	TPO no.	Species	Height	Trunk diameter	Radial crown spread	Crown break	Crown clearance	Age class	Physiology	Structure	Comments	Category
1		White mulberry	3.5m	190mm	N 2.4m E 2.9m S 3.2m W 2.9m	2m	N 1.5m	Semi-mature	Average	Indifferent	Growing in sub-surface planting pit, surrounded by patio and metal grate; no significant defects observed at base; tensile main unions; crown reduced within past 13 months; obscured from public view; insignificant component of group in which it stands.	C (1)
2		Walnut	18m	610mm	N 8m E 7.6m S 9.2m W 8.5m	2.5m	SE 2.1m	Mature	Average	Moderate	Off-site tree; prominent buttress roots; girdling roots at base; slightly leaning trunk; tensile unions throughout crown.	B (1)
3		Cider gum	10m	345mm	N 2.6m E 1.6m S 1.9m W 4.7m NW 4.1	2m	N 2.5m	Semi-mature	Average	Indifferent	No significant defects observed at base; 60° trunk lean to W; twin-stemmed from 2m, featuring tensile union; tensile unions throughout rest of crown; recently 'topped' and crown reduced; canopy visible in glimpsed narrow views from The Avenue; non-native species, out of character with surrounding area; inessential component of the wider landscape; set against backdrop of taller and established trees within 'The Lake Grounds' to the N.	C (1)
4		Honey locust	10m	280mm	N 3.75m NE 3.5m E 3m S 2.25m W 3.75m	1.3m	E 1.5m	Semi-mature	Average	Moderate	No significant defects observed at base; slightly leaning trunk to N; tensile unions throughout crown; canopy visible in glimpsed narrow views from The Avenue; recently 'topped' and crown reduced; inessential component of the wider landscape; set against backdrop of taller and established trees within 'The Lake Grounds' to the N.	C (1)
5		Holly	9m	140mm 130mm 175mm 240mm	N 5m E 4m S 4.5m W 4.5m	0m	E 1.9m	Semi-mature	Average	Indifferent	Multi-stemmed from base; ivy-covered near ground; tight compression fork with evidence of included bark at 1.8m; contributes to boundary screening; obscured from public view; significant component of the group in which it stands.	C (1)
6		Yew	5m	220mm	N 3m E 2m S 2.5m W 3m	1m	0.2m	Semi-mature	Average	Indifferent	Off-site tree; asymmetrical crown as suppressed by adjacent specimen.	C (1)
8	T0142	Yew	7m	360mm 165mm 350mm	N 2.25m E 2.25m S 2.7m W 2.25m	0.2m	NE 1.8m	Semi-mature	Average	Indifferent	Multi-stemmed from base; pruning wounds up to 200mm dia. on lower trunk consistent with crown raising; tensile main unions; crown has been heavily reduced or "topped" in past, leaving wounds up to 25mm in dia.; readily visible from The Avenue; significant component of group in which it stands.	C (1)

No.	TPO no.	Species	Height	Trunk diameter	Radial crown spread	Crown break	Crown clearance	Age class	Physiology	Structure	Comments	Category
9	T0142	Beech	16m	700mm est.	N 7m E 6m S 5m W 6.2m	2.5m	W 4.5m	Mature	Below average	Indifferent	Off-site tree; basal bark damage exposing sapwood with incipient decay; <i>Ganoderma spp</i> fungal fruiting body at base; tensile main unions; minor dieback at branch tips in S crown; asymmetrical crown partially, due to canopy dieback.	U
10-11		Holm oak	2.5m	#10 105mm #11 90mm	1m	1.5m	1.4m	Young	Average	Moderate	Pair of small ornamental specimens; maintained as 'topiary' balls; unremarkable trees of very limited merit.	C (1)
12-13		Bay	2m	#12 85mm #13 80mm	1m	1m	0.9m	Young	Average	Moderate	Pair of small ornamental specimens; maintained as 'topiary' balls; unremarkable trees of very limited merit.	C (1)
G1		Various	3m	Max 250mm est.	3m	0m	0m	Semi-mature	Average	Indifferent	Off-site group of trees and shrubs; species include yew, elder, holly, lilac and ivy; yew dominant; approx. 6 individuals.	C (1)
G2		Various	10m	Max 140mm	2m	0m	0m	Young	Average	Indifferent	Group of ornamental trees and shrubs; species include flowering cherry, bay, chusan palm, Italian cypress, Mexican orange blossom, camelia, box, firethorn and a weeping variety of larch; no single dominant species; approx. 10 individuals.	C (1)
G3		Various	4m	Max 3 stems @ 110mm est.	1.5m	0m	0m	Semi-mature	Average	Indifferent	Group of ornamental trees and shrubs, species include cabbage palm, Japanese acer, paper plant, rhododendron and walnut; cabbage palm dominant; 9 individuals present.	C (1)
G4		Various	3m	Max 100mm	2m	0m	0m	Young	Average	Indifferent	Group of two trees and a row of shrubs; species include monkey puzzle, strawberry tree and cherry laurel; cherry laurel dominant; contributes to boundary screening.	C (1)

Root Protection Areas (RPAs)

Root Protection Areas have been calculated in accordance with paragraph 4.6.1 of the British Standard 'Trees in relation to design, demolition and construction – Recommendations', BS 5837:2012. This is the minimum area which should be left undisturbed around each retained tree. RPAs are portrayed initially as a circle of a fixed radius from the centre of the trunk; but where there appear to be restrictions to root growth the circle is modified to reflect more accurately the likely distribution of roots.

Tree No.	Species	RPA	RPA Radius
1	White mulberry	16.3m ²	2.3m
2	Walnut	168.3m ²	7.3m
3	Cider gum	53.8m ²	4.1m
4	Honey locust	35.5m ²	3.4m
5	Holly	56.4m ²	4.2m
6	Yew	21.9m ²	2.6m
8	Yew	126.4m ²	6.3m
9	Beech	221.7m ²	8.4m
10-11	Holm oak	5.0m ²	1.3m
		3.7m ²	1.1m
12-13	Bay	3.3m ²	1.0m
		2.9m ²	1.0m
G1	Various	28.3m ²	3.0m
G2	Various	8.9m ²	1.7m
G3	Various	5.5m ²	1.3m
G4	Various	4.5m ²	1.2m

APPENDIX 4

Tree Protection Plan

Arboricultural Impacts: Summary
(For details, see below)

Impact	No. of Trees
Trees to be removed	2
Groups of trees to be fully or partially removed	2
TPO trees to be removed	0
Trees to be pruned	0
Trees where supervised demolition needed within RPAs	0
Trees where manual excavation needed within RPAs	0
Trees where above soil surfacing needed within RPAs	0
Trees with proposed underground services within RPAs	0

Trees to be Removed		
No	Species	Category
3	Cider gum	C (1)
4	Honey locust	C (1)
G2	Various (partial removal)	C (1)
G3	Various	C (1)

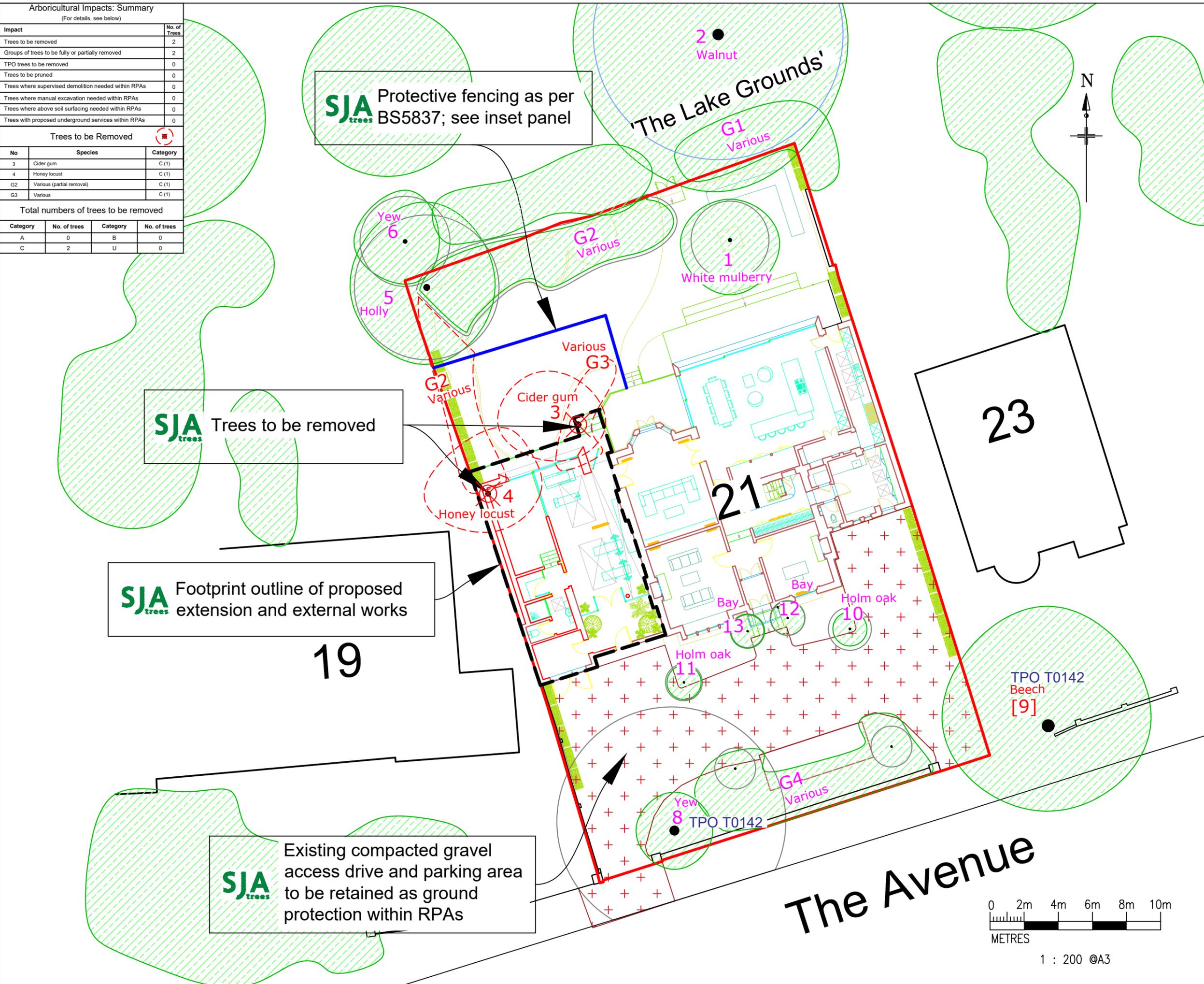
Total numbers of trees to be removed			
Category	No. of trees	Category	No. of trees
A	0	B	0
C	2	U	0

SJA trees Protective fencing as per BS5837; see inset panel

SJA trees Trees to be removed

SJA trees Footprint outline of proposed extension and external works

SJA trees Existing compacted gravel access drive and parking area to be retained as ground protection within RPAs



Protective Fencing

To be erected prior to the commencement of all works on site, and retained in place throughout construction. To comprise 2m tall 'Heras' welded mesh panels on rubber or concrete feet. The panels shall be joined together with two anti-tamper couplers, installed so that they can only be removed from inside the fence. Distance between the couplers should be at least 1m and should be uniform throughout the fence. Panels should be supported (where possible) on the inner side by stabilizer struts, which should normally be attached to a base plate secured with ground pins (see Figure 3a below). Where the fencing is to be erected on retained hard surfacing or it is otherwise unfeasible to use ground pins, e.g. due to the presence of underground services, the stabilizer struts shall be mounted on a block tray (see Figure 3b). "TREE PROTECTION ZONE - KEEP OUT" or similar notices to be attached to every fifth panel.

Figure 3 Examples of above-ground stabilizing systems

a) Stabilizer strut with baseplate secured with ground pins
b) Stabilizer strut mounted on block tray

TREE PROTECTIVE FENCING as shown in BS 5837: 2012, Section 6.2.2 & Figure 3.

Ground Protection

Existing compacted gravel access drive to be retained, to act as ground protection throughout development. If any materials are to be stored onsite and within the RPAs of retained trees, or mixing of cement, suitable interlocking polyethylene tread boards ("Ground-Guards" or similar), shall be laid above the compacted gravel access drive, prior to the storage of materials and pinned to the ground with steel pins to prevent movement.

Arboricultural Supervision

The arboricultural consultant will directly supervise all construction works that have to be undertaken within root protection areas. These include:

1. Location of protective fencing.
2. Lifting/excavation of existing hard surfaces.
3. Excavation/demolition of existing foundations.
4. All excavations, whether for proposed foundations, hard surfacing, or underground services.

SJA trees ARBORICULTURAL PLANNING CONSULTANTS

Project: No. 21 The Avenue

Client: Mr & Mrs Hardcastle-Jones

Drawing: TREE PROTECTION PLAN

Drawing no: SJA TPP 23489-041

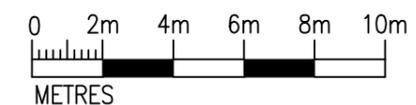
Based on: 1964.03.03.Pln01.022

Drawn by: NHK Date of Issue: Nov 2024 Scale: 1:200 @ A3

Checked by: FPS Tel:(01737) 813058 sja@sjatrees.co.uk

Tree nos.: 8	Category 'U' trees: [9]	Canopies of trees to be retained:
Category 'A' RPA: [Green]	Category 'B' RPA: [Blue]	Category 'C' RPA: [Grey]
Trees to be removed: [Red]	Protective fencing: [Blue]	Ground protection: [Red]

For further information refer to the SJA Trees Tree Survey Schedule. Do not scale from this drawing; please check all dimensions on site, and notify us of any discrepancies. SJA Trees (the trading name of Simon Jones Associates Ltd.) cannot be held responsible for inaccuracies in the topographical plan on which this drawing is based. © Simon Jones Associates Ltd. 2024. This drawing is copyright and may not be used or changed without the written consent of SJA Trees. This drawing is based on the proposed layout plan shown and referred to above. SJA Trees authorises its reproduction, without amendment, by the Local Planning Authority (LPA), and to its posting on the LPA website, to assist in consideration of this application only. This drawing is designed to reflect only the principles of layout and for design insofar as these relate to the protection of trees to be retained, and should NOT be read as a definitive engineering or construction method statement. Reference should be made to the architect or structural engineer, as appropriate, over any matters of construction detail or specification, or any engineering standards or regulatory requirements relating to proposed structures, hard surfaces or underground services.



1 : 200 @A3