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Arboricultural Implications Report Proposed development at Land to the rear of Sheepleas House

West Horsley



March 2024

Ref. SJA air 23581-01a

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 whilst one category 'B' tree is to be removed, no trees of high landscape or biodiversity value are to be removed. None of the main arboricultural features of the site are to be removed. The proposed removal of individuals and groups of trees will represent only a very minor alteration to the main arboricultural features of the site, only a minor alteration to the overall arboricultural character of the site and will not have an adverse impact on the arboricultural character and appearance of the local landscape.

S3. The incursions into the Root Protection Areas of trees to be retained are minor, and subject to implementation of the measures recommended on the Tree Protection Plan and set out at **Appendix 1**, no significant or long-term damage to their root systems or rooting environments will occur.

S4. None of the proposed dwellings are likely to be shaded by retained trees to the extent that this will interfere with their reasonable use or enjoyment by incoming occupiers, which might otherwise lead to pressure on the Local Planning Authority to permit felling or severe pruning that it could not reasonably resist.

S5. As the proposed development will not result in the removal of trees which are or contribute to significant natural features, will not damage or destroy trees covered by a TPO, includes planting of trees to integrate the development into the existing town and landscape and does not result in an unacceptable impact on existing trees, it complies with Policies G1 (12), G5 (9), NE5 and A15 of the Guildford Borough Council saved Local Plan Policies (2003) and Guildford Local Plan Policies 2015 – 2034 (2019).

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1. INTRODUCTION AND BACKGROUND INFORMATION

1.1. Instructions

1.1.1. SJAtrees has been instructed by BlackOnyx Projects to visit Sheepleas House, West Horsley and to survey the trees growing on or immediately adjacent to this site.

1.1.2. We are further asked to identify which trees are worthy of retention within a proposed development of the site; 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 Guildford Borough 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". It doesn't form part of planning policy; but it is a material consideration to which weight is likely to be given.

1.2.3. The proposed development comprises the construction of five detached dwellings with associated access from Epsom Road, parking and landscaping.

1.2.4. This report summarises and sets out the main conclusions of the baseline data collected during the tree survey and identifies those trees or groups of trees whose

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.

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 Bryan Ng of SJAtrees on Tuesday 30th January 2024. Weather conditions at the time were overcast but dry. Deciduous trees were not in leaf.

1.4. Site description

1.4.1. The site is 0.66ha in size and is located on the north side of Epsom Road (A246), as shown at *Figure 1* below. The north and west boundaries adjoin an adjacent arable field. The east boundary adjoins the grounds of the adjacent property and the south boundary fronts Epsom Road.



Figure 1: Site location shown on satellite imagery

1.4.2. The site is on ground that rises by 4m from its northern boundary to its southern boundary adjacent to Epsom Road and currently comprises a single detached dwelling with associated front hard standing and rear garden.

1.5. Soil type

1.5.1. The British Geological Survey Solid and Drift Geology map of the area indicates the site overlies a bedrock of Thanet Formation and Newhaven Chalk.

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 sandy soil.

1.5.3. We are not aware of a site investigation or soil analysis having been undertaken; but 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. At the time of writing none of these trees are covered by a tree preservation order (TPO).

1.6.2. The site is not within a conservation area, and therefore there are no constraints relating to existing trees in this regard.

1.7. Non-statutory designations

1.7.1. There are no woodlands within or abutting the site 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 site 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 policy - national

2.1.1. 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.

2.1.2. 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."**

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

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;

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

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."

2.1.4. 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."

2.1.5. 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."

2.1.6. 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;

2.1.7. 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...."

2.2. Local planning policy

2.2.1. Relevant local planning policies are contained with the Guildford Borough Council Local Plan 2003 and the recently adopted Guildford Local Plan: Strategy and Sites 2015 – 2034 (adopted 2019).

2.2.2. Policy G1 (12) "SAFEGUARDING AND ENHANCEMENT OF THE LANDSCAPE AND EXISTING NATURAL FEATURES" of the Local Plan 2003 states:

"G1 (12). "Development is designed to safeguard and enhance the characteristic landscape of the locality and existing natural features on the site, such as hedgerows, trees, watercourses and ponds which are worthy of protection."

2.2.3. Policy G5 (9) "LANDSCAPE DESIGN" of the Local Plan 2003 states:

"G5 (9). A high standard of landscape design, to include walls, enclosures and paving schemes, as well as trees and other planting is provided to ensure that new development integrates into the existing townscape and landscape." 2.2.4. Policy NE5 "DEVELOPMENT AFFECTING TREES, HEDGES AND WOODLANDS" of the Local Plan 2003 states:

"NE5. Development will not be permitted if it would damage or destroy trees protected by a Tree Preservation Order or in a conservation area unless the removal would:

1. Be in the interests of good arboricultural practice; or

2. The need for the development outweighs the amenity value of the protected trees.

If the removal of any trees is permitted as part of a development, a condition may require that an equivalent number (or more) of new locally native trees be planted either on or near the site."

2.3. Neighbourhood planning policy

2.3.1. The West Horsley Neighbourhood Plan 2016-2033 (December 2018) states at Policy WH12: Green and Blue Infrastructure Network (which includes the site's west and north boundaries):

"The Neighbourhood Plan identifies a Green and Blue Infrastructure Network as shown on the Green and Blue Infrastructure Map.

The Network comprises a variety of open spaces (as identified in the Local Plan), ancient woodlands, trees, woodlands, water bodies, assets of biodiversity value (including wildlife corridors and hedgerows) footpaths (including the Horsley Jubilee Trail), bridleways and cycleways.

Development proposals on land that lies within or adjoining the Network will be required to demonstrate how they maintain or enhance its visual characteristics and biodiversity; and to ensure their landscape schemes, layouts, public open space provision and other amenity requirements (such as pedestrian and cycle connections) contribute to improving the connectivity and maintenance of the Network.

Proposals which enhance/maintain the existing Green and Blue Infrastructure Network will be supported. Proposals to create new Green and Blue Infrastructure including pedestrian and cycle routes will also be supported."

3. THE TREES

3.1. Survey findings

3.1.1. We surveyed 45 individual trees, and six groups of trees growing within or immediately adjacent to the site. Their details can be found in the tree survey schedule at **Appendix 2**.

3.1.2. The site is characterised by a single dwelling towards the southern extent close to Epsom Road with a large grass covered back garden. Trees are concentrated around every boundary, enclosing the site in a dense, green screen with only small, newly planted trees situated to the front of the property and within the rear garden. The established trees around the boundary are a mixture of mature conifer and broadleaved trees with horse chestnut being the most dominant species on the western boundary and English oak around the remaining boundaries. The site is in keeping with the arboricultural character of the area and forms part of the green and blue infrastructure identified by the Parish Council.

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 natural features of the locality and worthy of protection or are already covered by a TPO. The individuals and groups of trees within or adjacent to the site, whose attributes we consider meet these criteria, are as follows:

• The row of mixed trees situated along the western, northern and north-eastern boundaries (nos. 1-3, 6-9, 11-20, 22-26, 30 and 33)

• The collection of trees forming the south-eastern boundary (nos. 40-45 and G6)

3.2.2. Three individual trees (nos. 4, 5 and 24) are unsuitable for retention, irrespective of the proposals, in that they are 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. However, as can be seen below, these trees are not necessarily shown to be removed as part of the proposals; some may be outside the development footprint or may be outside the red line boundary and in third-party ownership. These

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trees have been assessed as category 'U' and are indicated on the accompanying tree protection plan by **bracketed red** numbers.

3.2.3. There are no category 'A' trees and 27 category 'B' specimens. The remaining 15 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.

3.2.4. Of the groups of trees, none have been assessed as category 'A', three as category 'B' (G1, G2, and G3), and the remaining three as category 'C' (G4, G5 and G6).

3.3. Assessment of arboricultural impacts

3.3.1. The arboricultural impacts of the proposed site layout, drawing no. 23125 SK10 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, because they are situated 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 7 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 impacts⁴

⁴ 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, three individual trees and two groups of trees (nos. 21, 35, 35, G4 and G5) are to be removed, either because they are situated within the footprints of proposed structures or surfaces, or because they are too close to these to enable them to be retained. Two groups of trees are also to be removed.

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
21	English oak	9.5m	305mm	Semi-mature	C (1)
34	English oak	16.5m	475mm	Mature	B (12)
35	English oak	13m	295mm	Semi-mature	C (1)

Table 2: Trees to be removed

4.2. Assessment

4.2.1. All of the trees and groups of trees that constitute the main arboricultural features of the site and which make the greatest contribution to the character and appearance of the local landscape, to amenity or to biodiversity will be retained.

4.2.2. Whilst English oak no. 21 is situated along the western boundary of the site, its contribution to the wider group is limited due to its small size. Further to this, the row of specimens that form group G1 are of generally similar or larger size and obscure tree no. 21 from views along Epsom Road. Consequently, the removal of this specimen will have a negligible impact on the integrity or screening value of the boundary group. As such, groups G1's contribution to the local landscape and its function as a wildlife corridor will be largely unchanged.

4.2.3. Similarly, English oak nos. 34 and 35 are set into the site and do not form part of the adjacent boundary group (G3). Both of these trees, whilst readily visible in internal views, are entirely screened from all public views by trees that are to be

retained as part of the proposed development. Consequently, their removal will have no appreciable impact on the arboricultural character of the landscape. Additionally, due to the relative sizes of adjacent trees, the removal of these specimens will not have a significant impact on the tree-lined aesthetic of the site.

4.2.4. Whilst tree no. 34 is a mature specimen it is not a large or old specimen; it is only 16.5m tall and has a trunk diameter of 475mm. At this size it is not a significant landscape feature and English oak is not under-represented on the site so its ecological value is easily off-set. For these reasons, in the context of the benefits of the scheme and the need for new housing at a time of National housing crisis, we feel the removal of these trees is a reasonable request, subject to suitable mitigation in the form of replacement planting and potentially retaining the dead-wood habitat elsewhere on site so there not a significant loss of stored carbon from the site – this could be agreed by condition.

4.2.5. All of the trees that make up groups G4 and G5 are to be transplanted around the site. The trees will be re-planted in groups to maintain their current contribution to internal views of the site and sited at least 4m from other retained trees to give them appropriate space to establish and grow.

4.2.6. Purple plum trees nos. 4 and 5 are both small, squat specimens showing significant structural defects as well as impaired physiological function. As such, these trees are unsuitable for retention and should be removed for arboricultural management reasons, irrespective of the proposed development. That being said, as these trees do not impose upon the development in any way and are both small trees, there is no need to remove them and hence they can be retained for what ecological value they provide.

4.2.7. Only one of the trees to be removed (English oak no. 34) is a mature specimen of species of large ultimate size: all the other trees to be cleared are young, semimature 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 carbon⁵. Accordingly, the removal of only one mature tree on or adjacent to the site minimises the impacts on the benefits that mature trees provide in relation to smaller ones.

4.2.8. All of the trees within G4 and the majority within G5 to be removed are young specimens, which BS 5837 states "**need not necessarily be a significant constraint on the site's potential**".

4.2.9. 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 only a very minor alteration to the main arboricultural features of the site.

⁵ Stephenson N. L., Das A. J., Zavala M. A. (2014) Rate of tree carbon accumulation increases continuously with tree size. Nature, volume 507.

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 none of the proposed dwellings will be within 2m of 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.

6.1. Details

6.1.1. Parts of the proposed hard surfacing will encroach within the RPAs of three of the trees to be retained. These are shown in *Table 3* below.

Tree no.	Species	Incursion	Extent of incursion – including existing surfacing	% of RPA	Portion of incursion that is new surfacing	% of RPA
3	Horse chestnut	Proposed access road	0.5m ²	<1%	0m ²	0%
6	Douglas fir	Proposed access road	6m ²	6.7%	0m ²	0%
7	Horse chestnut	Proposed access road	91.3m ²	21.4%	30.3m ²	7.1%
8	False acacia	Proposed access road	8.8m ²	8.2%	6.2m ²	5.7%
9	Horse chestnut	Proposed access road	28.7m ²	16.2%	23.6m ²	13.4%
12	Horse chestnut	Proposed access road	66.4m ²	16.3%	66.4m ²	16.3%
13	Horse chestnut	Proposed access road	83.6m ²	14%	83.6m ²	14%
14	Horse chestnut	Proposed access road	22m ²	5.1%	22m ²	5.1%

Table 3: Proposed incursions within RPAs

6.2. Assessment

6.2.1. The incursions into the RPAs of trees listed in **Table 3** are by areas of proposed hard surfacing. The larges incursion is into the RPA of tree no. 7 and equates to 21.4% of its RPA. However, because 14.3% of this is already existing hard surfacing none of the incursions exceed the 20% maximum incursion into currently unsurfaced ground recommended in BS 5837⁶.

6.2.2. Taking account of existing ground levels and likely proposed levels of these areas, these will allow for design and construction of the new and replacement surfaces to be entirely above existing soil level, and accordingly no excavation will be required. Furthermore, where appropriate, new and replacement surfaces could

⁶ BS 5837, paragraph 7.4.2.3.

incorporate an appropriate cellular confinement system, filled and finished with suitable porous materials, to minimise soil compaction. To ensure no damage occurs to the roots or rooting environments of the relevant trees, installation will be undertaken under the control and supervision of the arboricultural consultant.

6.2.3. A significant section of the proposed access road within RPAs overlies an existing area of hard surfacing. Where practicable, this surfacing could be retained and incorporated into the access road, resulting in no new impacts on RPAs. Alternatively, if the existing surface must be replaced, the new surfacing is to be set no deeper than the sub-base so that any roots below remain undisturbed and a cellular confinement system, as set out above, could be incorporated into any areas of replacement surfacing.

6.2.4. As noted at Section 1.5 above, the site overlies a sandy and chalk soil. This means it will tolerate compaction better than a clay soil, and so compaction caused by the above-soil surfacing is less likely to be severe or damaging to the trees in the long-term.

6.2.5. 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 and the installation of ground protection, as shown on the TPP at **Appendix 4**.

6.2.6. 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. In a hierarchical manner we have assessed the significance of retained trees causing shade to: the fenestration of main habitable rooms within the shadow patterns⁷ of trees and directly facing the trees that shade them; the fenestration of main habitable rooms that are within the shadow patterns of retained trees but do not face those or other trees; the fenestration of other rooms within the shadow patterns of trees; and gardens.

7.1.2. As no windows of any of the proposed dwellings are within the shadow patterns of any retained trees, they will not be shaded by retained trees to the extent that this will interfere with their reasonable use or enjoyment by incoming occupiers; which might otherwise lead to pressure to permit felling or severe pruning that the LPA could not reasonably resist.

7.1.3. The question of whether trees should be included in calculations of daylighting is addressed in the Building Research Establishment guide⁸, which states that normally, "trees and shrubs need not be included, partly because their shapes are almost impossible to predict, and partly because the dappled shade of a tree is more pleasant than the deep shadow of a building."

7.1.4. In this case, all of the trees adjacent to plot 5 are deciduous and so the shading will be reduced in winter when they are not in leaf, and when this reduction might be most appreciated.

7.1.5. For these reasons, despite the relative proximity of proposed plot 5 to trees on the west boundary, it is unlikely to be shaded to the extent that this will interfere with incoming occupiers' reasonable use or enjoyment of these units, thereby leading inevitably to pressure to permit felling or severe pruning, which the LPA could not

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 Littlefair, P. J., op. cit.

reasonably resist.

7.1.6. Accordingly, the proposals comply with British Standard guidance on the probable impact of the existing trees on the proposed development, as set out at paragraph 5.3.4.⁹.

7.1.7. None of the gardens of proposed dwellings are likely to be shaded significantly by retained trees and hence all gardens are likely to receive adequate day light and sunlight whilst also benefiting from patches of shade when the trees are in leaf. Approximately 40% of the rear garden of Plot 4 is overhung by the canopy of oak tree no. 33. This may lead to some apprehension, but this can readily be controlled by the Council if it were to protect the tree. The tree is outside the ownership of Plot 4 and hence a further element of control is preset making control of the tree in the face of irrational apprehension easy for the LPA to resist. There is also a good degree of open space to the front of the dwellings that could be used communally.

⁹ BS 5837:2012, 5.3.4.

8. CONCLUSIONS

8.1. Summary

8.1.1. Our assessment of the impacts of the proposals on the existing trees concludes that whilst one category 'B' tree is to be removed, no trees of high landscape or biodiversity value are to be removed. None of the main arboricultural features of the site are to be removed. The proposed removal of individuals and groups of trees will represent only a very minor alteration to the main arboricultural features of the site, only a minor alteration to the overall arboricultural character of the site and will not have an adverse impact on the arboricultural character and appearance of the local landscape.

8.1.2. The incursions into the Root Protection Areas of trees to be retained are minor, and subject to implementation of the measures recommended on the Tree Protection Plan and set out at **Appendix 1**, no significant or long-term damage to their root systems or rooting environments will occur.

8.1.3. None of the proposed dwellings are likely to be shaded by retained trees to the extent that this will interfere with their reasonable use or enjoyment by incoming 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 of the main arboricultural features of the site, 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 some 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 retention of all of the main arboricultural features of the site recognises and will maintain the local landscape, and its countryside character, and thereby complies with Paragraph 176 of the NPPF.

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 local planning policy

8.3.1. As the proposed development will not result in the removal of trees which are or contribute to significant natural features, will not damage or destroy trees covered by a TPO, includes planting of trees to integrate the development into the existing town and landscape and does not result in an unacceptable impact on existing trees, it complies with Policies G1 (12), G5 (9), NE5 and A15 of the Guildford Borough Council saved Local Plan Policies (2003) and Guildford Local Plan Policies 2015 – 2034 (2019).

8.4. Compliance with neighbourhood planning policy

8.4.1. As the proposed development will not result in the removal of trees which are part of the local green infrastructure, it complies with Policy WH12 of the West Horsley Neighbourhood Plan 2016-2033 (December 2018).

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 above¹⁰ growing within or immediately adjacent to the site; 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 culturally. 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 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 development / 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 help mitigate and adapt to climate change; and whose removal would thereby be unlikely to comply with national planning policy guidance;

¹⁰ 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.

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

- A1.2.4. 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.
- A1.2.5. 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.
- A1.2.6. 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.
- A1.2.7. 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.
- A1.2.8. 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.
- A1.2.9. 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.
- A1.2.10. 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 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.
- A1.2.11. Based on these principles and recommendations, the tree survey and assessment of suitability for retention informed the production of a tree

¹² BS 5837, 4.5.10.

¹³ lbid., 5.1.1.

¹⁴ lbid., 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."

¹⁵ lbid., paragraph 5.2.2 Note 1.

constraints plan (TCP) which indicates the most suitable trees for retention, and their associated below-ground and above-ground constraints.

- A1.2.12. 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.

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 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 fencing/boarding contractor, the groundwork contractor(s) and the arboricultural consultant. The LPA tree officer will be invited to 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

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).

A2.5. 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 consist of a scaffold framework comprising a vertical and horizontal framework, well braced to resist impacts, with vertical tubes spaced at maximum intervals of 3.5m. Onto this, welded mesh panels should be securely fixed with wire or scaffold clamps, as shown in *Figure 2*

of that document. "**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 proposed access road and the footprint of the existing structure 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. For purely pedestrian traffic, scaffold boards (or similar) will be used. Scaffold boards will comply with British Standard BS 2482: 2009 *Specification for timber scaffold boards* and be at least 225mm in width and 38mm thickness; they will be butted up and attached to each other with wooden battens or metal tie straps, and laid either on an above-ground scaffold framework, or secured to the ground with steel pins above a compressible material (a 75mm deep layer of woodchips may be appropriate) laid on top of a geotextile membrane of an appropriate specification.
- A2.6.3. For wheeled or tracked traffic, ground boarding will be designed by a structural engineer, to take account of the type of soil and the likely loadings. Temporary aluminium roadway ('Trakway' or similar), interlocking plastic tread boards ("Ground-Guards" or similar), or reinforced concrete slabs may be appropriate. These will also be laid on top of a compressible material above a geotextile membrane.

A2.7. Proposed hard surfaces within RPAs

A2.7.1. Unacceptable damage to the roots and rooting environments of the trees to be retained during the construction of proposed hard surfaces that encroach within RPAs will be avoided by building them above existing soil level, or no deeper than the sub-base of the existing, to avoid digging and thus severing of roots; and an appropriate ground covering will be used beneath the subbase, to prevent or minimise compaction of the soil. This will be done in accordance with Section 7.4 of BS 5837. The locations where these measures will be required are marked by **orange honeycomb-hatching** on the TPP.

APPENDIX 3.

Tree Survey Schedule



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Preliminary Tree Survey Schedule

Sheepleas House, Epsom Road, West Horsely, Surrey

January 2024

SJA tss 23581-01

Tree Survey Schedule: Explanatory Notes Sheepleas House, Epsom Road, West Horsely, Surrey

 This schedule is based on a tree inspection undertaken by Bryan Ng of SJAtrees (the trading name of Simon Jones Associates Ltd.), on Tuesday the 30th January 2024. Weather conditions at the time were overcast but dry. Deciduous trees were not in leaf. 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. Species. 'Common names' are given, taken from MITCHELL, A. (1978) A Field Guide to the Trees of Britain and Northern Europe. 3. Height. Estimated with the aid of a hypsometer, given in metres. 4. 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. 5. 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 clearance. Distance from adjacent ground level to lowest part of lowest branch, in metres. 8. 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. 9. Physiology. Health, condition and function of the tree, in comparison to a normal specimen of its species and age. 10. 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 and irremediable morphological or pathological or pathological defects; but these are either remediable or do not put the tree at immediate or early risk of collapse. Poor: Significant and irremediable morphological or pathological or patholo	 12. 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, 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). (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, 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 way 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 with material conservation or other cultural value. (3) Trees with material con
b. Crown break. Height above ground and direction of growth of first significant live branch.	11. 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	 category C. Trees of low quality with an estimated remaining the 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 po material limited conservation or other cultural value

them significantly greater collective landscape value, and/or trees offering (3) Trees with no material limited conservation or other cultural value.

TREE SURVEY SCHEDULE

Sheepleas House, Epsom Road, West Horsely, Surrey

No.	Species	Height	Trunk diameter	Radial crown spread	Crown break	Crown clear- ance	Age class	Physio- logy	Structure	Comments	Cate gory
1	Douglas fir	18m	390mm	3.75m	6m	5.5m	Semi- mature	Average	Moderate	No significant defects observed at base; single trunk; multiple historic pruning wounds on lower trunk consistent with crown raising; part of aerodynamic group with meshing crowns providing companion shelter; no significant defects observed; upper crown readily visible from Epsom Road; significant component of group in which it stands.	B (12)
2	Sycamore	17m	425mm 260mm	N 2.5m E 8m S 5m W 8m	3.5m	N 5m E 5m S 5m W 3.5m	Semi- mature	Average	Indifferent	Prominent buttress roots; twin stemmed from base; wound with exposed heartwood at 0.1m, facing SE, occluding; one-sided crown as suppressed by adjacent specimens; part of aerodynamic group with meshing crowns providing companion shelter; upper crown readily visible from Epsom Road; of moderate quality and landscape value; significant component of group in which it stands.	B (12)
3	Horse chestnut	17m	640mm	N 4.5m E 3.75m S 3.5m W 7.5m	2.5m	N 4m E 3.5m S 3m W 1m	Semi- mature	Average	Moderate	Prominent buttress roots; single trunk; twin-stemmed from 2.5m, showing a tensile union; multiple historic pruning wounds on lower trunk at E side consistent with crown raising; tensile unions throughout rest of crown, where visible; one-sided crown as suppressed by adjacent specimens; part of aerodynamic group with meshing crowns providing companion shelter; upper crown readily visible from Epsom Road; significant component of group in which it stands.	B (12)
4-5	Purple plum	#T4 4.5m #T5 3.5m	#T4 150mm 310mm #T5 260mm	3m	0.5m	0.5m	Semi- mature	Below average	Poor	Small ornamental trees; decay on trunk; above average deadwood; of low quality and limited arboricultural value; of short-term potential.	U
6	Douglas fir	21m	445mm	4m	10.5m	10m	Semi- mature	Average	Moderate	No significant defects observed at base; single trunk; multiple historic pruning wounds on lower trunk consistent with crown raising; mechanical wounding on trunk at 2.5m, facing E, occluding; no significant defects observed; upper crown readily visible from Epsom Road; significant component of group in which it stands.	B (12)
7	Horse chestnut	20m	970mm	N 4.5m E 8.5m SE 8.5m S 7m W 7m	W 1.5m	N 1.5m E 5m S 1.5m W 1m	Mature	Average	Indifferent	Prominent buttress roots; multi-stemmed from 1.5m; tight compression fork with evidence of included bark; tensile unions throughout rest of crown, where visible; asymmetrical crown as suppressed by adjacent specimens; part of aerodynamic group with meshing crowns providing companion shelter; minimal deadwood; upper crown readily visible from Epsom Road; significant component of group in which it stands.	B (2)

No.	Species	Height	Trunk diameter	Radial crown spread	Crown break	Crown clear- ance	Age class	Physio- logy	Structure	Comments	Cate gory
8	False acacia	18m	330mm 360mm	N 2m E 6.25m S 1.5m W 6m	1m	6m	Semi- mature	Average	Indifferent	Trunk dia. measured at 1m; twin stemmed from 1m; W stem bifurcation at 1.5m, showing tensile union; asymmetrical crown as suppressed by adjacent specimens; part of aerodynamic group with meshing crowns providing companion shelter; minimal deadwood; deadwood up to 40mm in diameter, est.; obscured from public view; insignificant component of group in which it stands.	C (1)
9	Horse chestnut	20m	625mm	N 5.5m E 7.25m S 2.5m W 6.5m	4.5m	N 2m E 6m S 1.5m W 1m	Semi- mature	Average	Moderate	Single trunk; trunk bifurcation at 4.5m; acute union with no bark to bark contact; multiple historic pruning wounds on lower trunk at E side consistent with crown raising; no significant defects observed; upper crown readily visible from Epsom Road; significant component of group in which it stands.	B (12)
10	Sycamore	8m	380mm	N 2m E 0m S 2m W 7m	W 2m	N 2m E 6m S 2m W 1m	Semi- mature	Average	Indifferent	Single trunk; canopy entirely offset from base; suppressed crown as overtopped by adjacent specimens; obscured from public view; insignificant component of group in which it stands.	C (1)
11	False acacia	18m	390mm	N 3m E 5m S 2m W 5m	4.5m	4.5m	Semi- mature	Average	Indifferent	Pruning wounds on lower trunk consistent with crown raising; asymmetrical crown as suppressed by adjacent specimens; part of aerodynamic group with meshing crowns providing companion shelter; deadwood up to 80mm in diameter, est.; obscured from public view; insignificant component of group in which it stands	C (1)
12- 15	Horse chestnut	#T12 20.5m #T13 21m #T14 20.5m #T15 14.5m	#T15 555mm #T12 950mm #T13 1150mm #T14 980mm #T15 535mm	N 5m E 7.5m S 5m W 7m	0.5m	2m	Mature	Average	Indifferent	Row of closely growing specimens, forming a hedge or screen; #T12, #T13 trunk dia. measured at 0.5m; #14 wound with exposed heartwood at 1m of trunk, facing E; wound wood has formed on the periphery; #T15 twin stem from 0.5m; tight compression fork with evidence of included bark; acute union with bark to bark contact; pruning wounds on lower trunks consistent with crown raising; asymmetrical crowns as suppressed by adjacent specimens; all part of aerodynamic group with meshing crowns providing companion shelter; deadwood up to 50mm in diameter, est.; upper crown readily visible from Epsom Road; significant components of the group in which they stand.	B (12)
	Douglas fir	#T16 21m #T17 21m	#T16 320mm #T17 385mm	3.5m	10m	10m	Semi- mature	Average	Moderate	Single trunk; drawn-up and mutually suppressed; part of aerodynamic group with meshing crowns providing companion shelter; no significant defects observed; upper crown visible in glimpses from unnamed access driveway to the east; significant components of the group in which they stand.	B (12)
	Silver birch	#T18 15m #T19 14m	#T18 210mm #T19 260mm	4.5m	4m	0m	Semi- mature	Average	Moderate	Single trunk; drawn up and mutually supressed; obscured from public view; of low landscape value, due to small size; insignificant components of group in which they stand.	C (1)
20	Silver birch	13m	200mm	N 4m E 7.25m S 2m W 0m	5m	1.5m	Semi- mature	Average	Indifferent	Slightly leaning trunk to E; pruning wounds on lower trunk consistent with crown raising; canopy entirely offset from base; obscured from public view; insignificant component of group in which it stands.	C (1)

No.	Species	Height	Trunk diameter	Radial crown spread	Crown break	Crown clear- ance	Age class	Physio- logy	Structure	Comments	Cate gory
21	English oak	9.5m	305mm	6m	1.5m	1m	Semi- mature	Average	Moderate	Single trunk; multi-stemmed from 1.5m; tensile unions throughout crown; no significant defects observed; obscured from public view; of moderate quality, but currently of low value due to small size; insignificant component of group in which it stands.	C (1)
22	English oak	13m	550mm	N 6m E 6m S 7.5m W 5m	1.5m	1m	Mature	Average	Moderate	Single trunk; twin stemmed from 1.5m showing tensile union; one-sided crown as suppressed by adjacent specimens; part of aerodynamic group with meshing crowns providing companion shelter; minimal deadwood; no significant defects observed; upper crown visible in glimpses from unnamed access driveway to the east; of screening value; significant component of group in which it stands.	B (12)
23	English oak	17m	405mm	4.5m	7.5m	4m	Semi- mature	Average	Moderate	Single trunk; wound with exposed heartwood at 1.5m, facing S, occluding; no significant defects observed; upper crown visible in glimpses from unnamed access driveway to the east; contribute to screening in the northern boundary; of moderate potential; significant component of group in which it stands.	B (12)
24	English oak	20m	720mm ivy	N 7m E 5.5m S 7.5m W 7m	2.5m	0.5m	Mature	Average	Moderate	Single trunk; ivy-covered; significant tear-out wound on trunk at 3.5m; length 250mm, width 120mm est. with occluding wound wood on the periphery; part of aerodynamic group with meshing crowns providing companion shelter; deadwood up to 60mm in diameter, est.; upper crown visible in glimpses from unnamed access driveway to the east; contribute to screening in the northern boundary; significant component of group in which it stands.	B (12)
25	English oak	19m	755mm	N 7m E 3m S 7.5m W 4m	4m	N 2m E 4m S 6m W 6m	Mature	Average		Prominent buttress roots; single trunk; pruning wounds on lower trunk consistent with crown raising; tensile unions throughout crown, where visible; significant tear-out wound in upper crown; approx. 300mm in length and 150mm width; asymmetrical crown as suppressed by adjacent specimens; part of aerodynamic group with meshing crowns providing companion shelter; deadwood up to 50mm in diameter, est.; upper crown visible in glimpses from unnamed access driveway to the east; contribute to screening in the northern boundary; significant component of group in which it stands.	B (12)
26	English oak	20m	870mm	N 10m E 2.5m S 11.5m W 9m	3m	N 2.5m E 6m S 6m W 6m	Mature	Average	Moderate	Single trunk; multi-stemmed from 3m; pruning wounds on lower trunk consistent with crown raising; tensile unions throughout crown, where visible; part of aerodynamic group with meshing crowns providing companion shelter; deadwood up to 30mm in diameter, est.; no significant defects observed; upper crown visible in glimpses from unnamed access driveway to the east; contribute to screening in the northern boundary; significant component of group in which it stands.	B (12)
27	Holm oak	8.5m	250mm	3m	1.5m	0.5m	Semi- mature	Average	Moderate	Prominent buttress roots; single trunk; of moderate quality, but currently of low value due to small size; obscured from public view; insignificant component of group in which it stands.	C (1)

No.	Species	Height	Trunk diameter	Radial crown spread	Crown break	Crown clear- ance	Age class	Physio- logy	Structure	Comments	Cate gory
28- 29	Lombardy poplar	#T28 15m #T29 19m	#T28 885mm ivy #T29 810mm	2m	1.5m	3m	Mature	Below average	Indifferent	Prominent buttress roots; #T28 ivy-covered; #T29 twin-stemmed from 1.5m, showing a tensile union; historically topped at 12m above ground; obscured from public views; contributes to boundary screening; individuals conferring greater value as part of a group.	C (12)
30	English oak	14m	500mm 215mm 370mm	N 4.5m E 6.5m S 4.5m W 7.5m	1m	1.5m	Semi- mature	Average	Indifferent	Multi-stemmed from 1m; tensile unions throughout crown, where visible; minimal deadwood; deadwood up to 150mm in diameter, est.; no significant defects observed; contributes to boundary screening; of moderate quality, but currently of low value due to small size; significant component of group in which it stands.	B (1)
31	Hornbeam	5m	4 stems @ 40mm 4 stems @ 60mm all est.	3.5m	0m	0m	Semi- mature	Average	Indifferent	Small ornamental tree; multi-stemmed from base; insignificant feature of the landscape.	C (1)
32	English oak	20m	575mm	N 6.5m E 3m S 4m W 8m	3m	2m	Mature	Average	Moderate	Prominent buttress roots; single trunk; tensile unions throughout crown, where visible; one-sided crown as suppressed by adjacent specimens; part of aerodynamic group with meshing crowns providing companion shelter; deadwood up to 40mm in diameter, est.; no significant defects observed; readily visible from internal views; contributes to boundary screening; significant component of group in which it stands.	B (12)
33	English oak	20m	795mm	N 8m E 9m S 11m W 12m	3m	N 4m E 2m S 2m W 6m	Mature	Average		Prominent buttress roots; single trunk; tensile unions throughout crown, where visible; one-sided crown as suppressed by adjacent specimens; part of aerodynamic group with meshing crowns providing companion shelter; deadwood up to 80mm in diameter, est.; readily visible from internal views; contributes to boundary screening; significant component of group in which it stands.	B (12)
34	English oak	16.5m	475mm	8m	2m	1.5m	Mature	Average	Moderate	Single trunk; tensile unions throughout crown, where visible; minimal deadwood; no significant defects observed; readily visible from internal views; of moderate potential; significant feature of the landscape.	B (12)
35	English oak	13m	295mm	6m	2m	1.5m	Semi- mature	Average	Moderate	Single trunk; tensile unions throughout crown, where visible; suppressed crown as overtopped by adjacent specimens; minimal deadwood; no significant defects observed; of moderate quality, but currently of low value due to small size; insignificant feature of the landscape.	C (1)
36- 38	Lombardy poplar	#T36 20m #T37 21m #T38 20m	#T36 495mm #T37 325mm #T38 610mm	2m	10m	10m	Semi- mature	Average	Indifferent	Prominent buttress roots; single trunk; #T36 cavity at 4.5m, approx. 180mm in length and 60mm in width, facing S; no significant defects observed; crowns suppressed by adjacent trees; obscured from public views; contribute to boundary screening; inessential components of group in which they stand.	C (12)

No.	Species	Height	Trunk diameter	Radial crown spread	Crown break	Crown clear- ance	Age class	Physio- logy	Structure	Comments	Cate gory
39	English oak	12m	405mm	N 3m E 2.5m S 2.5m W 3m	5m	5m	Mature	Below average	Indifferent	Single trunk; suppressed crown as overtopped by adjacent specimens; sparsely foliated; of crown density reduction 50%; of short-term potential; insignificant component of group in which it stands.	C (12)
40	Sycamore	17m	415mm	N 7.5m E 6m S 3m W 5m	2m	2m	Semi- mature	Average	Moderate	Single trunk; twin-stemmed from 3m; acute main unions with no bark to bark contact; part of aerodynamic group with meshing crowns providing companion shelter; no significant defects observed; upper crown visible in glimpses from Epsom Road; significant component of group in which it stands.	B (2)
41	Beech	20m	495mm	N 7.5m E 5.5m S 3m W 5.5m	2m	1.5m	Semi- mature	Average	Moderate	Single trunk; twin-stemmed from 6m; one-sided crown as suppressed by adjacent specimens; part of aerodynamic group with meshing crowns providing companion shelter; no significant defects observed; upper crown visible in glimpses from Epsom Road; significant component of group in which it stands.	B (12)
42	English oak	17m	590mm ivy	5.5m	6m	5m	Semi- mature	Average	Moderate	Single trunk; ivy-covered; deadwood up to 40mm in diameter, est.; no significant defects observed; upper crown readily visible from internal views; significant feature of landscape.	B (12)
43- 44	Yew	8.5m	#T43 520mm #T44 280mm all est.	4.5m	0m	0m	Semi- mature	Average	Indifferent	Lower trunk inaccessible due to large structural limbs extending laterally from base; tight compression fork with evidence of included bark; no significant defects observed; obscured from public view but readily visible from internal views.	C (12)
45	English oak	15m	400mm 590mm all est.	N 3m E 5m S 6.5m W 5m	1m	N 3m E 2m S 4m W 3m	Semi- mature	Average	Indifferent	Off-site tree; twin stemmed from 1m showing tensile union; minimal deadwood; one- sided crown as suppressed by adjacent specimens; part of aerodynamic group with meshing crowns providing companion shelter; readily visible from Epsom Road; significant component of group in which it stands.	B (12)
G1	Various	Max 13m Avg 8m	Max 380mm Avg 280mm all ivy est.	3m	0m	0m	Semi- mature	Below average	Indifferent	Off-site group of trees; species include ash, sycamore, horse chestnut and hazel; approx. 45 individuals; row of closely growing specimens, forming a hedge or screen; group of drawn-up, mutually suppressed specimens; readily visible from Epsom Road; contributes to boundary screening; lower quality individuals conferring greater value as part of a group.	B (2)
G2	Various	Max 19m Avg 8m	Max 350mm Avg 250mm all est.	4m	0m	0m	Semi- mature	Below average	Indifferent	Species include ash, sycamore and hazel; approx. 20 individuals; row of closely growing specimens, forming a hedge or screen; group of drawn-up, mutually suppressed specimens; readily visible from the access driveway to the east; contributes to boundary screening; lower quality individuals conferring greater value as part of a group.	B (12)
G3	Various	Max 13m Avg 8m	Max 420mm Avg 250mm all est.	3m	0m	0m	Semi- mature	Below average	Indifferent	Species include Norway spruce, English oak, hazel, Lombardy poplar and silver birch; approx. 15 individuals; row of closely growing specimens, forming a hedge or screen; group of drawn-up, mutually suppressed specimens; readily visible from internal views; contributes to boundary screening; lower quality individuals conferring greater value as part of a group.	B (12)

No.	Species	Height	Trunk diameter	Radial crown spread	Crown break	Crown clear- ance	Age class	Physio- logy	Structure	Comments	Cate gory
G4	Silver birch	Max 7m Avg 6m	Max 110mm Avg 80mm all est.	2m	1m	1m	Young	Average	wooerale	Small recently planted specimens; approx. 22 individuals; of low landscape value, due to small size.	C (1)
G5	Various	Max 12m Avg 6m	Max 300mm Avg 130mm all est.	3m	1m	1m	Semi- mature	Average		Small recently planted specimens; species include silver birch, horse chestnut, Douglas fir and atlas cedar; approx. 8 individuals; of low landscape value, due to small size.	C (1)
G6	Various	Max 14m Avg 8m	Max 380mm Avg 250mm all est.	3.5m	0m	0m	Semi- mature	Average	Indifferent	Dense row of closely growing specimens, forming a hedge or screen; species include sycamore, ash, beech, hazel, English oak, horse chestnut and Douglas fir; was not possible to estimate numbers of stems; upper crown visible in glimpses from Epsom Road; contributes to boundary screening; lower quality individuals conferring greater value as part of a group.	C (2)

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	Douglas fir	68.8m ²	4.7m
2	Sycamore	112.3m ²	6.0m
3	Horse chestnut	185.3m ²	7.7m
4 5		53.7m ²	4.1m
4-5	Purple plum	30.6m ²	3.1m
6	Douglas fir	89.6m ²	5.3m
7	Horse chestnut	425.7m ²	11.6m
8	False acacia	107.9m ²	5.9m
9	Horse chestnut	176.7m ²	7.5m
10	Sycamore	65.3m ²	4.6m
11	False acacia	68.8m ²	4.7m
		408.3m ²	11.4m
12-15	Horse chestnut	598.3m ²	13.8m
12 10		434.5m ²	11.8m
		268.8m ²	9.3m
16-17	Douglas fir	46.3m ²	3.8m
-		67.1m ²	4.6m
18-19	Silver birch	20.0m ²	2.5m
		30.6m ²	3.1m
20	Silver birch	18.1m ²	2.4m
21	English oak	42.1m ²	3.7m
22	English oak	136.8m ²	6.6m
23	English oak	74.2m ²	4.9m
24	English oak	234.5m ²	8.6m
25	English oak	257.9m ²	9.1m
26	English oak	342.4m ²	10.4m
27	Holm oak	28.3m ²	3.0m
28-29	Lombardy poplar	354.3m ²	10.6m
		296.8m ²	9.7m
30	English oak	195.9m ²	7.9m
31	Hornbeam	9.0m ²	1.7m
32	English oak	149.6m ²	6.9m
33	English oak	285.9m ²	9.5m
34	English oak	102.1m ²	5.7m
35	English oak	39.4m ²	3.5m
		110.8m ²	5.9m
36-38	Lombardy poplar	47.8m ²	3.9m
		168.3m ²	7.3m
39	English oak	74.2m ²	4.9m
40	Sycamore	77.9m ²	5.0m
41	Beech	110.8m ²	5.9m
42	English oak	157.5m ²	7.1m
43-44	Yew	122.3m ² 35.5m ²	6.2m 3.4m
45	English oak		
45	English oak	229.9m ²	8.6m

G1	Various	65.3m ²	4.6m	
G2	Various	55.4m²	4.2m	
G3	Various	79.8m ²	5.0m	
G4	Silver birch	5.5m ²	1.3m	
G5	Various	40.7m ²	3.6m	
G6	Various	65.3m ²	4.6m	

APPENDIX 4.

Tree Protection Plan

Impact					
Trees to be removed					
Groups of trees to be transplanted					
TPO trees to be removed					
Trees to be pruned					
Trees where manual excavation needed within RPAs					
Trees where above soil surfacing needed within RPAs					
Trees with proposed underground services within RPAs					
	Trees	to be Removed	(
No		Species	Cate	gory	
21	English oak		C (1)		
34	English oak		В (
35	English oak		С	(1)	
Trees to be Transplanted				\Box	
No		Species Category		gory	
G4	Silver birch		C (1)		
G5	Various			(1)	
		require above soil require above soil ing within RPAs			
No.	Species	Type of structure			
3	Horse chestnut	Proposed access			
6	Douglas fir	Proposed access			
7	Horse chestnut	Proposed access			
8	False acacia	Proposed access			
9	Horse chestnut	Proposed access			
12	Horse chestnut	Proposed access			
13	Horse chestnut	Proposed access			
14	Horse chestnut	Proposed access			
	Above	Soil Surfacing			

The proposed hard surface access road within root protection areas

edestrian traffic: scaffold boards or similar, of at least 35mm pattens or steel tie straps, laid either on an above ground scaffold framework, or on a compressible material (a 75mm deep layer of woodchips may be appropriate) above a biaxial geotextile grid

For wheeled or tracked traffic: temporary aluminium roadway "Trakway" or similar), interlocking polyethelene tread boards ("Ground-Guards" or similar), or reinforced concrete slabs laid on an appropriate compressible layer above a biaxial geotextile grid - to be

The arboricultural consultant will directly supervise all construction

1. Location of protective fencing and ground protection 2. Lifting/excavation of existing hard surfaces.





