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## The Old Brickworks, Reeds Lane Sayers Common

**Arboricultural Implications Report** 





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## Arboricultural Implications Report Proposed re-development at Reeds Lane Sayers Common West Sussex BN6 9LS



October 2017

Ref. SJA air 17182-01a

#### **SUMMARY**

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

S2. Our assessment of the impacts on trees concludes that no veteran or ancient trees, no category 'A' trees, and 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 twelve individual trees will represent no alteration to the main arboricultural features of the site, and would not have an adverse impact on the arboricultural character and appearance of the local landscape.

S3. The proposed pruning is minor in extent, will not detract from the health or appearance of these trees, and complies with the current British Standard *BS 3998:2010 Tree work – Recommendations*.

S4. The incursions into the Root Protection Areas of trees to be retained are minor and within the tolerable limits of the species affected; 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.

S5. 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, and 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 protect the trees which contribute to the character of the area, incorporate the existing important trees into the design of the proposed re-development, prevent damage to their root systems through appropriate protection measures and provides space for expected future growth, it complies with Policy C6 of the Mid Sussex Local Plan 2004, and Policies DM24 and DM36 of the Mid Sussex District Plan 2014-2031 Pre-Submission Draft.

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#### 1. INTRODUCTION AND BACKGROUND INFORMATION

#### 1.1. Instructions

1.1.1. SJAtrees has been instructed by Reside Developments Limited to visit and 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 re-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 an outline planning application to be submitted to Mid Sussex District Council, and complies with local validation requirements, and with the recommendations of British Standard BS 5837:2012, *Trees in relation to design, demolition and construction – Recommendations* ('BS 5837').

1.2.2. The proposed development comprises the construction of 29 residential dwellings, associated hard surfacing including access from Reeds Lane to the south, landscaping and surface water drainage features.

1.2.3. The 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 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 trees, including those to be removed (Section 4), those to be pruned (Section 5), and those which might incur root damage that might threaten their viability (Section 6). The report also considers whether the proposed development could result in pressure to remove trees in the future as a result of them causing unreasonable apprehension or excessive shading (Section 7). A summary and conclusion, with regard to local planning policy, are presented in Section 8.

#### 1.3. Site inspection

1.3.1. A site visit and tree inspection was undertaken by Matt Jones of SJAtrees on Wednesday 11<sup>th</sup> October 2017. Weather conditions at the time were clear, dry and bright. Deciduous trees were in partial leaf.

#### 1.4. Site description

1.4.1. The site is located on the north side of Reeds Lane, to the north of the King Business Centre. The north boundary is formed by a post and wire fence which extends from the north-west corner of the site, eastwards along the southern extent of a large woodland (W1), to the eastern boundary, where the fence then diverts southwards along the eastern boundary to form the application site. The southern boundary abuts the northern boundary of the King Business Centre. The western boundary meets another open field and is separated by a post and wire fence which extends to the north-west corner of the site. The site is currently accessed via a narrow finger of land extending from Reeds Lane along the western boundary of the King Business Centre.

1.4.2. The site currently comprises a small outbuilding in the south-east corner, but is otherwise derelict. The topography of the site is generally flat in the open portion of the site, but slopes down from south-west to north-east along the eastern boundary adjacent to an existing pond.

#### 1.5. Statutory controls

1.5.1. At the time of writing we understand that none of these trees are covered by a tree preservation order (TPO).

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

1.5.3. There are no hedgerows on site which could meet the criteria to be deemed "Important" in the context of the landscape and wildlife criteria of the Hedgerows Regulations, 1997<sup>1</sup>.

#### 1.6. Non-statutory designations

1.6.1. There are no woodlands within or abutting the site that are classified as 'Ancient'. Ancient woodland is considered an important and irreplaceable habitat, and is defined by Natural England as "land that has had continuous woodland cover since at least 1600 AD".

<sup>&</sup>lt;sup>1</sup> The Hedgerows Regulations 1997; STATUTORY INSTRUMENTS 1997 No. 1160.

#### 2. METHODOLOGY

#### 2.1. National policy context

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. Paragraph 14 of the National Planning Policy Framework (NPPF), (March 2012), states that there is a presumption in favour of sustainable development: "At the heart of the National Planning Policy Framework is a presumption in favour of sustainable development, which should be seen as a golden thread running through both plan-making and decision-taking."

2.1.3. At paragraph 17, the NPPF provides a set of 12 core planning principles which underpin both plan-making and decision-taking. Three of these (bullet points 4, 5 and 7) can be applied to trees and their role in sustainable development. They state that planning should:

"(4) seek to secure ... a good standard of amenity for all existing and future occupants of land and buildings

(5) take account of the different roles and character of different areas, ..... recognise the intrinsic character and beauty of the countryside

(7) contribute to conserving and enhancing the natural environment"

2.1.4. The NPPF makes it clear that planning permission for development should be granted unless the proposal is inconsistent with the above principles or with the policies within the local development plan, unless the benefits of the proposal significantly and demonstrably outweigh its adverse effects, or unless the NPPF itself indicates that the proposal should be restricted.

2.1.5. Trees are mentioned specifically at paragraph 118 of the NPPF, which states: "planning permission should be refused for development resulting in the loss or deterioration of irreplaceable habitats, including ancient woodland and the loss of aged or veteran trees found outside ancient woodland, unless the need for, and benefits of, the development in that location clearly outweigh the loss."

#### 2.2. Local policy context

2.2.1. Local planning policies are contained with the Mid Sussex Local Plan 2004, and the Mid Sussex District Plan 2014-2031 Pre-Submission Draft.

2.2.2. Policy C6 of the Mid Sussex Local Plan 2004 states:

"Development resulting in the loss of woodlands, hedgerows and trees which are important in the landscape, or as natural habitats, or historically, will be resisted."

2.2.3. Policy DP24 "Character and Design" of the District Plan states:

"All development and surrounding spaces, including alterations and extensions to existing buildings and replacement dwellings, will be well designed and reflect the distinctive character of the towns and villages while being sensitive to the countryside. All applicants will be required to demonstrate that development: Protects open spaces, trees and gardens that contribute to the character of the area."

2.2.4. Policy DP36 "Trees, Woodland and Hedgerows" of the District Plan states:

"Development that will damage or lead to the loss of trees, woodland or hedgerows that contribute, either individually or as part of a group, to the visual amenity value or character of an area, and/ or that have landscape, historic or wildlife importance, will not normally be permitted. Trees, woodland and hedgerows will be protected and enhanced by ensuring development:

• incorporates existing important trees, woodland and hedgerows into the design of new development and its landscape scheme; and

• prevents damage to root systems and takes account of expected future growth; and

• where possible, incorporates retained trees, woodland and hedgerows within public open space rather than private space to safeguard their long-term management; and

• has appropriate protection measures throughout the development process; and

• takes opportunities to plant new trees, woodland and hedgerows within the new development to enhance green infrastructure and increase resilience to the effects of climate change; and

• does not sever ecological corridors created by these assets."

#### 2.3. Tree survey and baseline information

2.3.1. We surveyed individual trees with trunk diameters of 75mm and above<sup>2</sup>, trees with trunk diameters of 150mm and above growing in groups or woodlands, and shrub masses, hedges and hedgerows<sup>3</sup> 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.

2.3.2. We attached numbered plastic tags to the trunks of all on-site trees surveyed as individuals. The numbers on these tags correspond with the numbers in our tree survey schedule and on our tree location and protection plans (at Appendices 3 and 4). In practical terms, this aids identification of trees on the ground, allows them to be cross-referenced with our survey schedule, and ensures that if and when it comes to site clearance or felling, the potential for mistakes to occur is limited, and the correct trees are retained.

2.3.3. The baseline information collected during our 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 2**.

2.3.4. We surveyed trees as groups where we considered that they had grown together to form cohesive arboricultural features, either aerodynamically (trees that provide companion shelter), visually (e.g. avenues or screens) or culturally<sup>4</sup>. However, where we considered that it might be necessary to differentiate between specific trees within these groups, we also surveyed these individually.

<sup>4</sup> Ibid, 4.4.2.3

<sup>&</sup>lt;sup>2</sup> BS 5837, paragraph 4.2.4 b), recommends that all trees over 75mm stem diameter should be included in a preplanning land and tree survey.

<sup>&</sup>lt;sup>3</sup> Ibid, 4.4.2.7

2.3.5. 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.

2.3.6. We have categorised the trees in accordance with BS 5837, and details of the criteria used for this process can be found in the notes that accompany the tree survey schedule.

2.3.7. We have applied this methodology in line with the thrust of 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.

#### 2.4. Tree locations plan

2.4.1. The information in the tree survey schedule has been used to produce the tree locations plan at **Appendix 3**, which is based on the topographical survey plan provided. The locations of some additional trees, not shown on this plan, have been plotted using our own measurements taken on site.

#### 2.5. Tree constraints

2.5.1. In line with the NPPF's presumption in favour of sustainable development, we assessed whether any trees should be retained in the context of a proposed redevelopment. To do this, we identified the main arboricultural features within or immediately adjacent to the site, whose removal we considered could have an adverse impact on the character and appearance of the local landscape, on amenity or on biodiversity.

2.5.2. Whilst BS 5837 states that trees in categories 'A', 'B' and 'C' are all a material consideration in the development process, 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.

2.5.3. 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"<sup>5</sup>.

2.5.4. 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"<sup>6</sup>.

2.5.5. The 'Root Protection Areas' (RPAs)<sup>7</sup> 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 as a result of these considerations, so that they reflect more accurately the likely root distribution of the relevant trees.

2.5.6. To assess whether the trees identified for retention would be in harmony 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 day<sup>8</sup>.

2.5.7. Based on these principles and recommendations, the tree survey and our assessment of suitability for retention informed the production of a tree constraints

<sup>&</sup>lt;sup>5</sup> Ibid. 4.5.10.

<sup>&</sup>lt;sup>6</sup> Ibid. 5.1.1.

<sup>&</sup>lt;sup>7</sup> 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." BS 5837, paragraph 3.7.

<sup>&</sup>lt;sup>8</sup> BS 5837, paragraph 5.2.2 Note 1.

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

2.5.8. As a design tool, the TCP showed 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.

2.5.9. The TCP was then used to inform the siting of the proposed dwellings and areas of hard surfacing, about both of which we were consulted on 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.

#### 2.6. Arboricultural impact assessment and tree protection plan

2.6.1. Once finalised, we assessed the arboricultural impacts of the proposed layout, by overlaying it onto our TCP, and produced the tree protection plan (TPP) presented at **Appendix 4.** This is based on the proposed site layout plan by CMYK Architects, drawing no. 1636/P/10.02.

2.6.2. The TPP identifies the trees which will 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.

2.6.3. 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 at **Appendix 1** to this report. The implementation of, and adherence to, these measures can readily be secured by the imposition of appropriate planning conditions.

2.6.4. For the trees shown to be retained, all measurements for pruning specifications, percentage estimates of RPA incursions and shading issues have been calculated using AutoCAD software.

2.6.5. Details of the impacts identified within these categories, and our assessment of their respective significance, are analysed in Sections 4 to 7 below.

2.6.6. On the basis of these findings, we have assessed the magnitude of the overall arboricultural impact of the proposals according to the categories defined in *Table 1* below;

Category	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 impacts<sup>9</sup>

<sup>&</sup>lt;sup>9</sup> Determination of magnitude based on DETR (2000) Guidance on the Methodology for Multi-Modal Studies, as modified and extended.

#### 3. THE TREES

#### 3.1. Survey findings

3.1.1. We surveyed a total of 44 individual trees, seven groups of trees, one hedgerow and one area of woodland growing within or immediately adjacent to the site. Their details are found in the tree survey schedule at **Appendix 2**.

3.1.2. The trees on and adjacent to the site are typical in size, species-mix and age class of rural West Sussex. The principal species in English oak which is found as large, roadside trees along Reeds Lane, and in the tree belts and woodland that define the site boundaries. The English oaks are supplemented by other native, broad-leafed species such as goat willow, ash, hornbeam and sycamore. There are non-native coniferous specimens, including blue cedar and Leyland cypress. In terms of density, the south, east and north boundaries are heavily populated with trees. Beyond the northern boundary is a large area of woodland, within which English oak is the dominant species.

#### 3.2. Assessment of suitability for retention

3.2.1. The main arboricultural features within or immediately adjacent to the site, whose removal we consider could have an adverse impact on the character and appearance of the local landscape, on amenity or on biodiversity, are as follows:

- the large off-site area of woodland (W1) beyond the northern boundary of the main part of the site, which is readily visible in long-range views across the site, and provides a dense backdrop to the site in views from Reeds Lane;
- the large off-site English oak (no. 4) located within the rear garden of "The Badgers" along the southern boundary of the site, which is readily visible and screens the trees beyond it in views from Reeds Lane;
- the off-site group of Leyland cypress (G7) which provides boundary screening between the site and the King Business Centre, therefore obscuring views of the trees within the site in views from Reeds Lane; and

• the line of five off-site English oaks (nos.1, 2 and 8-10), which grow along the northern side of Reeds Lane, and are visible by pedestrians and vehicles in long-range views along this road.

3.2.2. None of the individual trees have been assessed as category 'U'.

3.2.3. There are no category 'A' trees but 24 category 'B' specimens. The remaining 20 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, hedgerow and woodland, the woodland (W1) has been assessed as category 'A'. Three groups (G2, G5 and G7) have been assessed as category 'B', and the remaining three groups (G3, G4 and G6) and hedgerow (H1) as category 'C'.

#### 4. TREES TO BE REMOVED

#### 4.1. Details

4.1.1. To accommodate the proposed development, as shown on the proposed layout plan, 13 individual trees 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.

4.1.2. Of the trees to be removed, three are category 'B' and ten are category 'C'. The category 'B' trees to be removed are shown and listed on the TPP and at **Table 2** below.

Tree no.	Species	Height	Trunk diameter	Age class	BS category
5	Blue cedar	13m	est. 575mm	Semi-mature	B (12)
30	Hornbeam	11m	505mm	Semi-mature	B (12)
31	English oak	13m	290mm 345mm 495mm (all over ivy)	Semi-mature	B (12)

 Table 2: Category "B" trees to be removed

4.1.3. None of the individual trees to be removed are covered by a TPO (see 2.2.1 above).

4.1.4. Two groups of trees (G2 and G5) will be partially removed as part of the proposals. These groups are not covered by the TPO.

#### 4.2. Assessment

4.2.1. All those trees or 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 (see paragraph 3.2.1), will be retained.

4.2.2. As there are no ancient or veteran trees on site, none will be removed.

4.2.3. Twenty-one of the 24 category 'B' trees are to be retained, but three, blue cedar (no. 5), hornbeam (no. 30) and English oak (no. 31) are to be removed, as shown in *Table 2* above.

4.2.4. The two broad-leafed category 'B' trees to be removed (hornbeam, no. 30 and English oak, no. 31) are not large trees; nor are they mature. The hornbeam is 11m tall and the English oak 13m, with trunk diameters of 505mm and 290mm, 345mm and 495mm (all over ivy) respectively. Moreover, they are located in the southern portion of the site, immediately adjacent to the site boundaries which in turn are abutted by off-site trees. The row of private residential properties along Reeds Lane to the south and south-east of the trees, and the belt of trees, including the large individual English oak (no. 4) located within the curtilage of the westernmost property, "The Badgers", screen the upper canopies of both trees to be removed in views from Reeds Lane.

4.2.5. The trees are also screened in views from the south-west along Reeds Lane, and from within the King Business Centre by the presence of the mixed-species belt of trees around the perimeter of the business centre (G1), and the established Leyland cypress hedge (G7) which extends along the eastern boundary of the King Business Centre from Reeds Lane. Therefore, the removal of hornbeam (no. 30) and English oak (no. 31) will go largely unnoticed from the surrounding public viewpoints, and will not have an adverse impact on the arboricultural character or appearance of the site.

4.2.6. The third category 'B' tree to be removed is the blue cedar (no. 5), currently growing within the rear garden of a residential property accessed via Reeds Lane. Again, it is not a tall specimen, measured at 13m tall with a trunk diameter estimated at 575mm due to limited access to the garden.

4.2.7. Blue cedar is a non-native, coniferous specimen, and this tree is likely to have been planted by the owner of the property in which it is found. At present, it is visible in views from Reeds Lane, and from the junction with Meadow View to the south, but only the upper 6m is distinguishable from this viewpoint.

4.2.8. As a species, cedar is often considered unsuitable for retention in close proximity to residential dwellings for a number of reasons. It can achieve heights in excess of 30m, and on sites with appropriate conditions, can grow very rapidly. The tallest cedar in the UK was measured at 38m in height, in 2007. Furthermore, mature

cedars tend to develop large and spreading crowns, which if standing alone in the open can often become broader than the tree is tall, comprising large and heavy low branches.

4.2.9. The species also has a high propensity to form weak forks and for fork failure. The brittle wood characteristics tends to form heavy branches which are prone to failure. These can become laden with ice or snow in the winter months, increasing the likelihood of entire branch failure. Such branches are also at risk of failure following a major wind event, particularly if they are already situated in a wind-exposed position within a site.

4.2.10. The crowns of mature trees of this genus are often dense, and can be found growing in layers. Consequently, the typical shade cast by cedar is dense, restricting the access of sunlight and daylight through the canopy; sometimes to such an extent that in conjunction with the high volume of debris created by the tree that covers the ground beneath the canopy (dead needles, cones and small twigs) the ability to grow anything beneath them is lost.

4.2.11. For the reasons discussed above, the removal of the blue cedar (no. 5) will not be to the detriment of the local landscape. Conversely, it will remove a nonnative, large-growing specimen from a site where the surrounding trees are native, broad-leafed trees and will enhance the arboricultural character of the wider landscape following completion of the proposals.

4.2.12. Ten of the 20 category 'C' trees on site are to be retained; the remaining ten category 'C' trees 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.

4.2.13. Three of the trees to be removed (English oaks nos. 35, 36 and 40) are young specimens, which BS 5837 states "**need not necessarily be a significant constraint on the site's potential**"<sup>10</sup>.

<sup>&</sup>lt;sup>10</sup> Ibid. 4.5.10.

4.2.14. Furthermore, the proposals incorporate considerable replacement tree planting; this is shown on the proposed site layout produced by CMYK Architects (ref: 1636/P/10.02) submitted with the application. To distinguish between the existing trees, and those that are proposed, the proposed have been coloured dark green on the appended TPP. The inclusion of the replacement planting will mitigate the proposed removals, improve the age class balance of the trees on site, enhance the local landscape, and re-establish a framework for the ongoing and long-term character of the site. The establishment of the proposed removals on the character and appearance of the site

4.2.15. 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. Three individual trees to be retained are to be pruned to facilitate implementation of the proposals. These are shown at **Table 3** below.

Tree no.	Species	Proposed works
111	English oak	Crown lift to 5m above the proposed road and parking bays beneath the southern portion of canopy
114	English oak	Crown lift to 5m above the proposed road and parking bays beneath the southern portion of canopy
116	English oak	Crown lift to 5m above the proposed road and parking bays beneath the southern portion of canopy

#### Table 3: Proposed pruning works

5.1.2. Moreover, two groups of trees (G1 and G5) will be pruned to facilitate the proposals. The lateral growth of the mixed-species belt of off-site trees (G1) will be cut back to 2m beyond the site boundary. The group of small self-seeded trees (G5) along the eastern boundary will be cut back, or individual trees removed if necessary, to give adequate space for the proposed swale to be constructed in the north-east corner of the site.

#### 5.2. Assessment

5.2.1. The extent of pruning proposed to the trees listed in **Table 3** is minor. Branches to be removed are mostly small in size, and will result in a maximum wound size no greater than 100mm in diameter; this will have an insignificant effect on the health and physiological condition of these trees, and complies with the recommendations of British Standard BS 3998:2010, *Tree work – Recommendations*.

5.2.2. The loss of individual specimens within group G5 along the eastern boundary of the site will go largely unnoticed, even from internal viewpoints, due to the dense screen that will remain following the proposed tree work.

5.2.3. In terms of impact upon the landscape, the proposed pruning is minor in extent, and will be largely screened in views by either the remainder of the trees' canopies, or by other trees growing within or adjacent to the site. It will have a negligible effect on

the appearance of the trees when viewed from outside the site itself, and accordingly will not detract from the character or appearance of the site.

5.2.4. Following the pruning specified, none of the proposed dwellings will lie within 2m of the extents of the canopies of trees to be retained, thereby providing adequate working space for construction, 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 four of the trees to be retained. These are shown in *Table 4* below.

Tree no.	Species	Description	% of RPA
37	English oak	Proposed footpath	3.7%
104	English oak	Proposed parking space	1.7%
105	English oak	Proposed parking space	0.2%
116	English oak	Proposed road	6.1%

#### Table 4: Proposed incursions within RPAs

#### 6.2. Assessment

6.2.1. The incursions set out above are exclusively by areas of hard surfacing, as opposed to proposed dwellings or other structures which would require more significant founding and construction.

6.2.2. As the incursions into the RPAs of trees nos. 37, 104, 105 and 116 are by roads, footpaths and parking spaces, subject to proposed levels, some degree of excavation will likely be required. To minimise impacts on these specimens, excavation within these RPAs will be undertaken manually, under the direct control and supervision of an appointed arboricultural consultant, so that any over dig into the RPAs is avoided, and any roots encountered can be treated appropriately.

6.2.3. As a species, mature English oaks often show a negative response to RPA incursions in excess of 10% of individual RPAs. As the largest proposed incursion is 6.1%, and because the individuals affected are semi-mature, there is no reason to suggest that these incursions will result in significant or irreversible damage to the roots or rooting environments of the four English oaks (nos. 37, 104, 105 and 116), particularly as they are of average physiological condition (the highest level of physiology ascribed to a tree by SJAtrees).

6.2.4. The incursions into the RPAs of the four trees listed above do not extend to more than 6.1% of individual RPAs, inclusive of a 500mm construction margin, and therefore they do not exceed the 20% maximum incursion into currently unsurfaced ground recommended in BS 5837<sup>11</sup>.

6.2.5. Moreover, with the exception of English oak (no. 37), the English oaks affected by RPA incursions are semi-mature, and therefore within a period of their genetic lifespan where growth is rapid, allowing for additional energy reserves to be produced and stored to adapt to changes in their rooting environments. The incursion into the mature English oak (no. 37) equates to just 3.5% and therefore, is small enough to be unlikely to have a significant impact upon the physiological condition of the tree.

6.2.6. Additionally, as this is an outline planning application, once the principle of the proposed re-development is agreed to by the LPA, the minor RPA incursions can be designed out at the detailed design stage, further reducing the impact of the trees set out in this report.

6.2.7. 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**.

6.2.8. 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.

<sup>&</sup>lt;sup>11</sup> BS 5837, paragraph 7.4.2.3.

#### 7. RELATIONSHIP OF RETAINED TREES TO NEW DWELLINGS

#### 7.1. Details

7.1.1. None of the proposed dwellings have their main habitable rooms directly facing trees within the shadow patterns<sup>12</sup> of which they are situated; that is, where proposed dwellings are sited in an arc between the north-west and the east of retained trees, and are closer to them than the current heights of these specimens.

#### 7.2. Assessment

7.2.1. As none of the proposed dwellings lie within the shadow patterns of any retained trees, they will also 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.

7.2.2. The sizes and dispositions of the proposed private gardens are such that in our assessment they will not be unduly shaded, and will receive reasonable sunlight and daylight. Their use is thus unlikely to lead to demands for felling or severe pruning of trees that the LPA would find difficult to resist.

<sup>&</sup>lt;sup>12</sup> BS 5837, 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 on trees concludes that no veteran or ancient trees, no category 'A' trees, and 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 twelve individual trees will represent no alteration to the main arboricultural features of the site, and would not have an adverse impact on the arboricultural character and appearance of the local landscape.

8.1.2. The proposed pruning is minor in extent, will not detract from the health or appearance of these trees, and complies with the current British Standard *BS* 3998:2010 Tree work – Recommendations.

8.1.3. The incursions into the Root Protection Areas of trees to be retained are minor and within the tolerable limits of the species affected; 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.

8.1.4. 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, and which might otherwise lead to pressure on the Local Planning Authority to permit felling or severe pruning that it could not reasonably resist.

8.1.5. The sizes and dispositions of the proposed private gardens are such that in our assessment they will not be unduly shaded, and will receive reasonable sunlight and daylight. Their use is thus unlikely to lead to future demands for felling or severe pruning of trees.

#### 8.2. Compliance with national planning guidance

8.2.1. As the proposals will not involve the removal of any ancient, veteran or "aged" trees, they comply with paragraph 118 of the NPPF.

8.2.2. As the proposed development will maintain all the main arboricultural features of the site, and thereby will not have an adverse impact on the arboricultural character and appearance of the local landscape, or on trees of significant amenity or biodiversity value, it complies with national planning policy guidance.

#### 8.3. Compliance with local planning policies

8.3.1. As the proposed development will protect the trees which contribute to the character of the area, incorporate the existing important trees into the design of the proposed re-development, prevent damage to their root systems through appropriate protection measures and provides space for expected future growth, it complies with Policy C6 of the Mid Sussex Local Plan 2004, and Policies DM24 and DM36 of the Mid Sussex District Plan 2014-2031 Pre-Submission Draft.

#### 8.4. Conclusion

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

## APPENDIX 1 Protection of retained trees

#### A1.1. Tree Protection Plan

A1.1.1. 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.

#### A1.2. Pre-start meeting

A1.2.1. Prior to the commencement of any site clearance 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. 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.

#### A1.3. Protective fencing

A1.3.1. 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.

A1.3.2. 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.

A1.3.3. 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.

A1.3.4. 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.

#### A1.4. Manual excavation within RPAs

A1.4.1. The first 750mm depth of excavations required within the RPAs of the trees to be retained (as shown by **bold orange lines** on the TPP) will be dug by hand, using a compressed air soil pick if appropriate, and under on-site arboricultural supervision, in order to safeguard against the possibility of unacceptable root damage being caused to these specimens. Any roots encountered of over 25mm diameter will be cut back cleanly to the face of the dig nearest to the tree, using a sharp hand saw or secateurs, and their cut ends covered with hessian to prevent desiccation.

## APPENDIX 3 Tree Survey Schedule



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## **Tree Survey Schedule**

## Reeds Lane, Sayers Common, West Sussex, BN6 9LS

October 2017

### **Tree Survey Schedule: Explanatory Notes**

#### Reeds Lane, Sayers Common, West Sussex, BN6 9LS

This schedule is based on a tree inspection undertaken by Matt Jones of SJAtrees (the trading name of Simon Jones Associates Ltd.), on Wednesday the 11th October 2017. Weather conditions at the time were clear, dry and bright. Deciduous trees were in partial leaf.	<b>7. Crown clearance.</b> Distance from adjacent ground level to lowest part of lowest branch, in metres.	<b>12. Category.</b> Based on the British Standard "Trees in relation to design, demolition and construction - Recommendations", BS 5837: 2012, Table 1, adjusted to give a greater weighting to trees that
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.	8. Age class. Young: Age less than 1/3 life expectancy Semi-mature: 1/3 to 2/3 life expectancy Mature: Over 2/3 life expectancy Over-mature: Mature, and in a state of decline	contribute to the character and appearance of the local landscape, to amenity, or to biodiversity. <b>Category U:</b> Trees in such a condition that they cannot realistically be retained as living trees in the context of the current
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.	Veteran: Mature, with a large trunk diameter for the species; but showing signs of ancientness, irrespective of actual age, with decay or hollowing, and a crown that has undergone some retrenchment and has a structure characteristic of the latter stages of life.	<ul> <li>Iand use for longer than 10 years.</li> <li>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).</li> <li>Trees that are dead or are showing signs of significant, immediate, and</li> </ul>
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.	trunk diameter for species; with extensive decay or hollowing; and a crown that has undergone retrenchment and has a structure characteristic of the latter stages of life.	<ul> <li>irreversible overall decline.</li> <li>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.</li> </ul>
<b>1. Tree no.</b> Given in sequential order, commencing at "1". Numbers correspond with numbering on topographical survey plan.	<b>9. Physiology.</b> Health, condition and function of the tree, in comparison to a normal specimen of its species and age.	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.
<b>2. Species.</b> 'Common names' are given, taken from MITCHELL, A. (1978) A Field Guide to the Trees of Britain and Northern Europe. Botanical names are shown in italics.	<b>10. Structure.</b> 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.	<ul> <li>(2) I rees, groups or woodlands of particular visual importance as arboricultural and/or landscape features.</li> <li>(3) Trees, groups or woodlands of significant conservation, historical, commemorative or other value.</li> </ul>
<b>3. Height.</b> Estimated with the aid of a hypsometer, given in metres.	upright and reasonably symmetrical structure; a particularly good example of its species. Good: No significant physiological or structural defects, and an upright and reasonably symmetrical structure	<b>Category B:</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 remediately detailed under the part matter part materials and though the second se
<b>4. Trunk diameter.</b> 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.	Moderate: No significant pathological defects, but a slightly impaired physiological structure; however, not to the extent that the tree is at immediate or early risk of collapse. Indifferent: Significant physiological or pathological defects; but these are either remediable or do not put the tree at immediate or	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
<b>5. Radial crown spread.</b> 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 amall trace with reasonable our metrical	early risk of collapse. Poor: Significant and irremediable physiological or pathological defects, such that there may be a risk of early or premature collapse.	<ul><li>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.</li><li>(3) Trees with material conservation or other cultural value.</li></ul>
crowns, a single averaged figure is quoted.	Hazardous: Significant and irremediable physiological or pathological defects, with a risk of imminent collapse.	<b>Category C</b> : Trees of low quality with an estimated remaining life expectancy of at least 10 years, or young trees with a stem diameter below 150mm.
o. Crown break. Height above ground and direction of growth of first significant live branch.	<b>11. Comments.</b> 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	<ol> <li>Unremarkable trees of very limited merit or of such impaired condition that they do not qualify in higher categories.</li> <li>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.</li> <li>Trees with no material limited conservation or other cultural value.</li> </ol>
SJA	Reeds Lane, Sayers Common, West Sussex, BN6 9LS	Tree Schedule - October 2017

#### TREE SURVEY SCHEDULE

### Reeds Lane, Sayers Common, West Sussex, BN6 9LS

No.	Species	Height	Trunk diameter	Radial crown spread	Crown break	Crown clear- ance	Age class	Physio - logy	Structure	Comments	Cate gory
1	English oak	11m	680mm (over ivy)	6.5m N 6m E 5.25m S 7m W	2.5m	2m	Mature	Average	Indifferent	Off-site tree; prominent buttress roots; evidence of animal burrowing near base; asymmetrical crown as suppressed by adjacent specimens; visible from Reeds Lane; significant component of the immediate landscape; of moderate quality and landscape value; of long-term potential.	B (12)
2	English oak	11m	905mm	9.25m N 7.75m E 8m S 8m W	3m	2m	Mature	Average	Indifferent	Off-site tree; twin-stemmed from 3m; significant compression fork with evidence of included bark; extends from 1m to 3m to bifurcation; 'elephant ear' formation evident on S side; smaller than normal leaf size; visible from Reeds Lane; significant component of the immediate landscape; of moderate quality and landscape value; of long-term potential.	B (12)
3	Ash	12m	415mm	2.5m N 4m E 6.25m S 1.75m W	3.5m	4m	Semi- mature	Average	Poor	Off-site tree; many surface roots, damaged on upper sides, probably by mowers; cavity at base; decay at base; heavily cut back from adjacent power lines; visible from Reeds Lane; inessential component of the immediate landscape; of low quality; of moderate landscape value; of medium-term potential.	C (123)
4	English oak	11m	est. 550mm	8.25m N 9.75m E 6m S 7m W	3m	2m	Semi- mature	Average	Moderate	Off-site tree; asymmetrical crown as suppressed by adjacent specimens; tree showing characteristics consistent with species; upper canopy partially visible from Reeds Lane; significant component of the immediate landscape; of moderate quality and landscape value; of long-term potential.	B (12)
5	Blue cedar	13m	est. 575mm	7m N 8m E 6m S 5.5m W	0.5m	0.75m N	Semi- mature	Average	Moderate	Off-site tree; asymmetrical crown as suppressed by adjacent specimens; upper canopy partially visible from Reeds Lane; significant component of the immediate landscape; of moderate quality and landscape value; of long-term potential.	B (12)
6	English oak	9m	est. 725mm	0m N 12m E 0m S -1.5m W	0m	0m	Mature	Average	Poor	Off-site tree; on-site tree which has failed at root plate in the past; now lying across boundary but has regrown to contribute to the screening along this boundary; inessential component of the immediate landscape; of low quality, of low landscape value, but of long-term potential.	C (123)
7	English oak	13m	885mm (over ivy)	7m N 7m E 3.75m S 7.25m W	3m	3m	Mature	Average	Moderate	Off-site tree; asymmetrical crown as suppressed by adjacent specimens; field boundary specimen; largely screened in views from Reeds Lane by the presence of other trees; significant component of the immediate landscape; of moderate quality and landscape value; of long-term potential.	B (12)
8	English oak	8.5m	490mm	5.25m N 4.5m E 6m S 5.5m W	3m	2.5m	Semi- mature	Average	Moderate	Off-site tree; much epicormic growth on trunk; asymmetrical crown as suppressed by adjacent specimens; visible from Reeds Lane; significant component of the immediate landscape; of moderate quality and landscape value; of long-term potential.	B (12)

No.	Species	Height	Trunk diameter	Radial crown spread	Crown break	Crown clear- ance	Age class	Physio - logy	Structure	Comments	Cate gory
9	English oak	11m	790mm	6.5m N 6.5m E 6.75m S 8m W	4m	5m	Mature	Average	Moderate	Off-site tree; crown has been heavily reduced or "topped" in past; visible from Reeds Lane; significant component of the immediate landscape; of moderate quality and landscape value; of long-term potential.	B (12)
10	English oak	12m	660mm	5m N 6.25m E 5.75m S 5m W	5m	4m	Mature	Below average	Moderate	Off-site tree; above average dead wood in crown; sparsely foliated; visible from Reeds Lane; significant component of the immediate landscape; of moderate quality and landscape value; of medium-term potential.	B (12)
27	Goat willow	8.5m	250mm 315mm @1m 260mm	5.5m N 5.25m E 6.25m S 6.25m W	1m	1m	Semi- mature	Average	Indifferent	Abnormal swelling or 'Bottle-butt' at base; three-stemmed from base; tight compression forks with evidence of included bark; small self-seeded specimen; largely screened in views from Reeds Lane by the presence of other trees; visible from public footpath in adjacent field; of moderate quality and of long-term potential; but of low landscape value.	C (1)
28	English oak	9.5m	300mm @1.25m	4.5m N 4m E 3.5m S 3.75m W	2m	2m	Semi- mature	Average	Indifferent	Twin-stemmed from 2m; tight compression fork with evidence of included bark; asymmetrical crown as suppressed by adjacent specimens; small self-seeded specimen; largely screened in views from Reeds Lane by the presence of other trees; inessential component of the immediate landscape; of moderate quality and of long-term potential; but of low landscape value.	C (1)
29	English oak	8m	270mm 285mm 250mm	5.25m N 5m E 4m S 5m W	1.5m	1m	Semi- mature	Average	Indifferent	Three-stemmed from base; no evidence of included bark; small self-seeded specimen; largely screened in views from Reeds Lane by the presence of other trees; inessential component of the immediate landscape; of moderate quality and of long-term potential; but of low landscape value.	C (1)
30	Hornbeam	11m	505mm	8.5m N 9.75m E 3m S 7m W	2.5m	2m	Semi- mature	Average	Moderate	Twin-stemmed from 3m; no evidence of included bark; asymmetrical crown as suppressed by adjacent specimens; largely screened in views from Reeds Lane by the presence of other trees; significant component of the immediate landscape; of moderate quality and landscape value; of long-term potential.	B (12)
31	English oak	13m	290mm 345mm 495mm (all over ivy)	5.25m N 7m E 7.5m S 7.5m W	4.5m	3m	Semi- mature	Average	Indifferent	Three-stemmed from base; tight compression forks with evidence of included bark; asymmetrical crown as suppressed by adjacent specimens; notable reduction of leaves and buds on lowest branch on E side, originating at 2.75m; significant component of the immediate landscape; of moderate quality and landscape value; of long-term potential.	B (12)
32	English oak	6.5m	360mm @1.25m	4.5m N 3.5m E 4.5m S 3.75m W	1.5m	1.5m	Semi- mature	Average	Indifferent	Much epicormic growth on trunk; small self-seeded specimen; short, squat specimen; not visible from outside the site; inessential component of the immediate landscape; of moderate quality and of long-term potential; but of low landscape value.	C (1)
33	English oak	7.5m	420mm (over ivy) est. 175mm (over ivy)	3.5m N 5m E 5.5m S 5.25m W	3m	3m	Semi- mature	Average	Moderate	Heavily ivy-covered; dense ivy impedes inspection of lower trunk; asymmetrical crown as suppressed by adjacent specimens; field boundary specimen; inessential component of the immediate landscape; of moderate quality and of long-term potential; but of low landscape value.	C (12)

No.	Species	Height	Trunk diameter	Radial crown spread	Crown break	Crown clear- ance	Age class	Physio - logy	Structure	Comments	Cate gory
34	English oak	9m	310mm (over ivy) 320mm (over ivy)	5.5m N 4.5m E 4.25m S 4.5m W	3m	3m	Semi- mature	Average	Moderate	Twin-stemmed from base; tight compression fork with evidence of included bark; ivy- covered; asymmetrical crown as suppressed by adjacent specimens; field boundary specimen; inessential component of the immediate landscape; of moderate quality and of long-term potential; but of low landscape value.	C (1)
35- 36	English oak	9m 8m	#35 195mm #36 105mm #36 170mm	3.25m N 4m E 3.75m S 4m W	2m	1.25m	Young	Average	Moderate	Small self-seeded specimen; not visible from outside the site; inessential component of the immediate landscape; of moderate quality and of long-term potential; but of low landscape value.	C (1)
37	English oak	11.5m	765mm	9.25m N 8.75m NE 8.5m E 8.75m SE 9m S 8.75m SW 7.5m W 6.75m NW	2m	2m	Mature	Average	Moderate	Buttress and surface roots extend to 1.6m N, 1.1m E, 1.6m S, 1.1m W; evidence of historic crown lifting; woundwood development around historic wounds appears sound; many tight branch attachment points in close proximity; bark to bark contact between a 45-degree angle branch and a lateral branch on SW at 2m; beginning to fuse together; short, squat specimen due to open growing location; largely screened in views from the public road to S by presence of other trees and dwellings; physiological and structural capacity to become a main arboricultural feature in future, but currently of low value in the wider landscape due to small size, significant component of the immediate landscape from internal viewpoints; of moderate quality and landscape value; of long-term potential.	B (1)
38	Goat willow	8.5m	275mm @1.25m 250mm 275mm	5.5m N 4.25m E 5.5m S 4.75m W	1.5m	1m	Semi- mature	Average	Indifferent	Three-stemmed from base; tight compression forks with evidence of included bark; small self-seeded specimen; not visible from outside the site; inessential component of the immediate landscape; of moderate quality and of long-term potential; but of low landscape value.	C (12)
39	English oak	7m	215mm	4.5m	2m	1.5m	Semi- mature	Average	Moderate	Suppressed crown as overtopped by adjacent specimens; small self-seeded specimen; not visible from outside the site; inessential component of the immediate landscape; of moderate quality and of long-term potential; but of low landscape value.	C (1)
40	English oak	6m	195mm	3.5m	2m	1.5m	Young	Average	Moderate	Small self-seeded specimen; not visible from outside the site; inessential component of the immediate landscape; of moderate quality and of long-term potential; but of low landscape value.	C (12)
101	English oak	9m	350mm 470mm	7m N 6m E 6m S 6.75m W	2.5m	2m	Semi- mature	Average	Moderate	Twin-stemmed from base; no evidence of included bark; field boundary specimen; significant component of the immediate landscape; of moderate quality and landscape value; of long-term potential.	B (12)

No.	Species	Height	Trunk diameter	Radial crown spread	Crown break	Crown clear- ance	Age class	Physio - logy	Structure	Comments	Cate gory
102	Goat willow	9m	310mm	4.75m N 4m E 4m S 4.25m W	3m	0m	Semi- mature	Average	Moderate	Broken branches hung up in crown; storm damage in crown; small self-seeded specimen; inessential component of the immediate landscape; of moderate quality and of long-term potential; but of low landscape value.	C (12)
103	Hawthorn	6.5m	270mm (over ivy)	3.5m N 3.5m E 3.5m S 3.5m W	1.5m	1.5m	Semi- mature	Average	Moderate	Small self-seeded specimen; not visible from outside the site; inessential component of the immediate landscape; of moderate quality and of long-term potential; but of low landscape value.	C (1)
104	English oak	12m	535mm (over ivy)	5m N 6.5m E 7.5m S 6m W	3m	3m	Semi- mature	Average	Moderate	Significant tree growing on the edge of an area of wet soil colonised by willow and hawthorn specimens; asymmetrical crown as suppressed by adjacent specimens; significant component of the immediate landscape; of moderate quality and landscape value; of long-term potential.	B (12)
105	English oak	8m	415mm	3.25m N 2.75m E 5m S 7m W	2m	2m S 0.25m W	Semi- mature	Average	Indifferent	Suppressed crown as overtopped by adjacent specimens; one-sided crown as suppressed by adjacent specimens; significant tree growing on the edge of an area of wet soil colonised by willow and hawthorn specimens; inessential component of the immediate landscape; of moderate quality and of long-term potential; but of low landscape value.	C (1)
106	English oak	8m	505mm (over ivy)	3.5m N 3m E 3m S 5.5m W	3m	1m	Semi- mature	Average	Moderate	lvy-covered; asymmetrical crown as suppressed by adjacent specimens; significant tree growing on the edge of an area of wet soil colonised by willow and hawthorn specimens; inessential component of the immediate landscape; of moderate quality and of long-term potential; but of low landscape value.	C (1)
107	Sycamore	11m	355mm	3m N 2m E 2m S 2m W	3m	4m	Semi- mature	Average	Indifferent	Squirrel damage in crown; suppressed specimen; not visible from outside the site; inessential component of the immediate landscape; of moderate quality and of long-term potential; but of low landscape value.	C (1)
108	English oak	11m	450mm	4m N 4m E 4m S 7m W	2m	2m	Semi- mature	Average	Moderate	Tree showing characteristics consistent with species; not visible from outside the site; significant component of the immediate landscape; of moderate quality and of long-term potential; but of low landscape value.	C (12)

No.	Species	Height	Trunk diameter	Radial crown spread	Crown break	Crown clear- ance	Age class	Physio - logy	Structure	Comments	Cate gory
109- 119	English oak	17m to 20m	#109 545mm (over ivy) #110 645mm (over ivy) #111 530mm #112 450mm #113 415mm 330mm (over ivy) #114 610mm #115 430mm #116 755mm #117 660mm #118 290mm 425mm 310mm #119 480mm	5m N 5m E 0m S 5m W	3m	3m	Semi- mature	Average	Moderate	#8 prominent buttress roots on all sides, particularly to N, extending to 1m from trunk; #118 three-stemmed from base, evidence of fungal fruiting bodies consistent with the decay fungus <i>Fistulina hepatica</i> (Beefsteak fungus) found at ground level on W side; co- dominant stems; significant dieback at branch tips; #109-119 eleven individual specimens which make up S boundary of woodland (W1) along N boundary of main part of the site; all are significant components of the woodland and woodland edge in which they stand; largely screened in views from road to S by presence of other trees and buildings; but the wider woodland is readily visible from Reeds Lane; of moderate quality and landscape value; of long-term potential.	B (12)
120	English oak	8m	245mm	4m N 4m E 4m S 4m W	2m	2m	Semi- mature	Average	Moderate	Small self-seeded specimen; visible from public footpath in adjacent field; inessential component of the immediate landscape; of moderate quality and of long-term potential; but of low landscape value.	C (1)
G1	Various	Up to 14m	Up to est. 325mm	8m N 8m E 8m S 8m W	3m	1.5m	Semi- mature	Average	Indifferent	Off-site, mixed-species group of trees; species include goat willow, white poplar, and hornbeam. hawthorn, elder and English oak; predominantly white willow with an understorey of specimens of other species; many twin-stemmed or multi-stemmed from near base with evidence of included bark, mutually drawn-up and supressed; growing predominantly towards N; individual poplar specimens throughout appear to have been topped in the past, not consistent across other species within group; provides screening between this and adjacent site; screens majority of trees further N in views from Reeds Lane; of moderate quality and of long-term potential; but of low landscape value.	C (12)

No.	Species	Height	Trunk diameter	Radial crown spread	Crown break	Crown clear- ance	Age class	Physio - logy	Structure	Comments	Cate gory
G2	Various	Up to 15m	Up to est. 425mm	4m N 4m E 4m S 4m W	1m	1m	Semi- mature	Average	Indifferent	Row of closely growing specimens, forming a hedge or screen; species include hornbeam, English oak, sycamore and hawthorn; aerodynamic group with meshing crowns providing companion shelter; provides significant screening in views from adjacent commercial premises; essential component of the immediate landscape; of moderate quality and landscape value; of long-term potential.	B (12)
G3	Various	Up to 4m	Up to est. 40mm	2m N 3m E 2m S 1.5m W	0.5m	0.5m	Young	Average	Indifferent	Off-site group of closely growing specimens forming a hedge or screen; species include hawthorn, blackthorn and goat willow; aerodynamic group with meshing crowns providing companion shelter; of only low-level screening value; of moderate quality and of long-term potential; but of low landscape value.	C (1)
G4	Hawthorn	Up to 8m	Up to est. 250mm	4m N 4m E 4m S 4m W	2m	2m	Semi- mature	Average	Indifferent	Belt of small self-seeded specimens; not visible from outside the site; inessential component of the immediate landscape; of moderate quality and of long-term potential; but of low landscape value.	C (1)
G5	Various	Up to 14m	Up to est. 350mm	5m N 5m E 5m S 5m W	1m	1m	Semi- mature	Average	Indifferent	Large group of self-seeded specimens forming boundary screening; species include hawthorn, goat willow, sycamore, English oak, ash and silver birch; predominantly goat willow but includes small areas of English oak; drawn-up and mutually supressed; of moderate quality and landscape value; of long-term potential.	B (12)
G6	Ash	Up to 13m	Up to est. 325mm	4m N 4m E 4m S 4m W	4m	4m	Semi- mature	Average	Moderate	Pair of self-seeded specimens; not visible from outside the site; inessential component of the immediate landscape; of moderate quality and of long-term potential; but of low landscape value.	C (1)
G7	Leyland cypress	Up to 8m	Up to est. 200mm	2.5m N 2.5m E 2.5m S 2.5m W	0.25m	0.25m	Young	Average	Indifferent	Off-site group of trees; row of closely planted specimens, designed to form a hedge or screen; appears to be regularly managed; of only low-level screening value; of moderate quality and landscape value; of long-term potential.	B (12)
H1	Hornbeam	Up to 3.5m	Up to est. 40mm	0.5m N 0.5m E 0.5m S 0.5m W	0.25m	0.25m	Young	Average	Indifferent	Off-site tree; row of closely planted specimens, designed to form a hedge or screen; appears to be regularly managed; of only low-level screening value; of moderate quality and landscape value; of long-term potential.	C (1)
W1	Various	Up to 15m	Up to est. 600mm	5m N 5m E 5m S 5m W	2m	2m	Mature	Average	Indifferent	Species include English oak, hazel, holly, goat willow and ash; large area of woodland which extends beyond site boundaries; principal overstorey species is English oak; occasional ash specimens throughout; provides a dense backdrop to the site; essential component of the immediate landscape; of moderate quality and high landscape value; of long-term potential.	A (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	English oak	209.2m <sup>2</sup>	8.16m
2	English oak	370.5m <sup>2</sup>	10.86m
3	Ash	77.9m <sup>2</sup>	4.98m
4	English oak	136.87m <sup>2</sup>	6.6m
5	Blue cedar	149.6m <sup>2</sup>	6.9m
6	English oak	237.8m <sup>2</sup>	8.7m
7	English oak	354.3m <sup>2</sup>	10.62m
8	English oak	108.6m <sup>2</sup>	5.88m
9	English oak	282.3m <sup>2</sup>	9.48m
10	English oak	197.1m <sup>2</sup>	7.92m
27	Goat willow	103.7m <sup>2</sup>	5.75m
28	English oak	40.7m <sup>2</sup>	3.6m
29	English oak	98.0m <sup>2</sup>	5.59m
30	Hornbeam	115.4m <sup>2</sup>	6.06m
31	English oak	202.7m <sup>2</sup>	8.03m
32	English oak	58.6m <sup>2</sup>	4.32m
33	English oak	93.7m <sup>2</sup>	5.46m
34	English oak	89.8m <sup>2</sup>	5.35m
35-36	English oak	17.2m <sup>2</sup>	2.34m
		18.1m <sup>2</sup>	2.4m
37	English oak	264.7m <sup>2</sup>	9.18m
38	Goat willow	96.7m <sup>2</sup>	5.55m
39	English oak	20.9m <sup>2</sup>	2.58m
40	English oak	17.2m <sup>2</sup>	2.34m
101	English oak	155.4m <sup>2</sup>	7.03m
102	Goat willow	43.5m <sup>2</sup>	3.72m
103	Hawthorn	33.0m <sup>2</sup>	3.24m
104	English oak	129.5m <sup>2</sup>	6.42m
105	English oak	77.9m <sup>2</sup>	4.98m
106	English oak	115.4m <sup>2</sup>	6.06m
107	Sycamore	57.0m <sup>2</sup>	4.26m
108	English oak	91.6m <sup>2</sup>	5.4m

109-119	English oak	134.4m <sup>2</sup> 188.2m <sup>2</sup> 127.1m <sup>2</sup> 91.6m <sup>2</sup> 127.2m <sup>2</sup> 168.3m <sup>2</sup> 83.6m <sup>2</sup> 257.9m <sup>2</sup> 197.1m <sup>2</sup> 163.2m <sup>2</sup> 104.2m <sup>2</sup>	6.54m 7.74m 6.36m 5.4m 6.36m 7.32m 5.16m 9.06m 7.92m 7.21m 5.76m
120	English oak	27.2m <sup>2</sup>	2.94m
G1	Various	47.8m <sup>2</sup>	3.9m
G2	Various	81.7m <sup>2</sup>	5.1m
G3	Various	7.1m <sup>2</sup>	1.5m
G4	Hawthorn	28.3m <sup>2</sup>	3.0m
G5	Various	55.4m <sup>2</sup>	4.2m
G6	Ash	47.8m <sup>2</sup>	3.9m
G7	Leyland cypress	18.1m <sup>2</sup>	2.4m
H1	Hornbeam	7.1m <sup>2</sup>	1.5m
W1	Various	162.9m <sup>2</sup>	7.2m

## APPENDIX 4 Tree Location Plan



## APPENDIX 5 Tree Protection Plan





## Report presented by



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