SJA trees
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Arboricultural Implications Report

Proposed development at

Land South of Green Lane

Chesterton

Oxfordshire

August 2022

Ref. SJA air 20010-01

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 of the proposals on the existing trees concludes that no mature trees, no veteran or ancient trees, no category 'A' or 'B' 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 trees will represent only a very minor alteration to the main arboricultural features of the site and the overall arboricultural character of the site. As such the proposals will not have an adverse impact on the arboricultural character and appearance of the local landscape or the adjacent conservation area.

S3. As no trees are to be pruned, and none of the proposed dwellings will be within 15m 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.

S4. 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.

S5. None of the proposed dwellings or private gardens 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.

S6. As the proposed development will retain and protect all trees that contribute to the area's character and local distinctiveness and incorporates significant tree planting resulting in a net increase in tree numbers within the site, it complies with Polices ESD10, ESD13 and ESD15 of the adopted Cherwell Local Plan 2011-2031 (July 2015).

CONTENTS

APPENDICES

1. INTRODUCTION AND BACKGROUND INFORMATION

1.1. Instructions

1.1.1. SJAtrees has been instructed by Wates Developments Limited to visit the land south of Green Lane, Chesterton 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 Cherwell 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. 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 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 (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 Nigel Kirby and Finn Cullerne of SJAtrees on Wednesday 20th August 2020. Weather conditions at the time were overcast with persistent rain. Deciduous trees were in full leaf.

1.4. Site description

1.4.1. The site is approximately 14.88ha in size and is located on the south side of Green Lane, as shown at ***Figure 1*** below. The north boundary abuts Green Lane, the rear gardens of properties off Vespasian Way and the Chesterton Community Centre playing fields. The northern section of the east boundary abuts a small road leading to Little Chesterton, but then extends westwards away from the road adjoining an agricultural field. The south boundary abuts agricultural fields. The west boundary abuts the road connecting Green Lane to Wendlebury Road with fields beyond.

Figure 1: Site location shown on Google Earth image

1.4.2. It is on ground that rises gently from south to north, and currently comprises two arable fields with vegetative boundaries and a small woodland copse adjacent to the eastern boundary of the east field. The public footpath no. 161/4/10 runs alongside the east boundary, from which views of the site are afforded.

1.5. Soil type

1.5.1. The British Geological Survey Solid and Drift Geology map of the area indicates the north section of the site lies on Cornbrash Formation (limestone) with the southern section of the site lying on Kellaway Clay and Sand Member. There is a paucity of information on the likely superficial deposits on the site, but a small area of River Terrace deposit is shown in a small southern section of the east field.

1.5.2. Whilst no site investigation or soil analysis has been undertaken, the British Geological Survey map suggests that that the soil conditions are likely to be highly variable across the site and may be susceptible to compaction in some areas and less so in others, subject to the localised soil conditions.

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, but the east boundary abuts the Chesterton Conservation Area. The Character Appraisal for this area mentions trees at paragraphs 8.7, 9.6, 12.4 and Appendix 1, which is summarised in 8.7, which states *inter alia*: **"Tree cover is important to the general character of this area. This is mainly broadleaved, with some pines and evergreens located around the larger grounds of the Old Vicarage, The Old Manor and the Churchyard. The Old Vicarage with its mature gardens, set behind a high limestone wall provides a landscaped backdrop to the northern part of the conservation area. The churchyard contains many trees, which frame the church and contribute significantly to its setting. There are no Tree Preservation Orders (TPOs) with in the area."**

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. 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. The National Planning Policy Framework (NPPF) (July 2021) 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 130, within Section 12 "Achieving well-designed 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;

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 131 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 Planning for climate change states at paragraph 153: "**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 174, 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 180, 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 policy context

2.2.1. Local planning policies are contained in the adopted Cherwell Local Plan 2011-2031 (July 2015) and the Saved Policies of the Cherwell Local Plan 1996 (November 1996)

2.2.2. The relevant section of Policy ESD 10 of the Local Plan (2011-2031) states, *inter alia*:

"Protection and enhancement of biodiversity and the natural environment will be achieved by the following:

… The protection of trees will be encouraged, with an aim to increase the number of trees in the District"

2.2.3. The relevant section of Policy ESD 13 of the Local Plan (2011-2031) states, *inter alia*:

"Opportunities will be sought to secure the enhancement of the character and appearance of the landscape, particularly in urban fringe locations, through the restoration, management or enhancement of existing landscapes, features or habitats

and where appropriate the creation of new ones, including the planting of woodlands, trees and hedgerows.

Development will be expected to respect and enhance local landscape character, securing appropriate mitigation where damage to local landscape character cannot be avoided. Proposals will not be permitted if they would:

- **Cause undue visual intrusion into the open countryside**
- **Cause undue harm to important natural landscape features and topography**
- **Be inconsistent with local character Impact on areas judged to have a high level of tranquillity…"**

2.2.4. The relevant section of Policy ESD 15 of the Local Plan (2011-2031) states, *inter alia*:

"…New development proposals should:

…Contribute positively to an area's character and identity by creating or reinforcing local distinctiveness and respecting local topography and landscape features, including skylines, valley floors, significant trees, historic boundaries, landmarks, features or views, in particular within designated landscapes, within the Cherwell Valley and within conservation areas and their setting…"

2.3. Neighbourhood policy context

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

2.4. Tree survey and baseline information

2.4.1. We surveyed individual trees with trunk diameters of 75mm and above[1], trees with trunk diameters of 150mm and above growing in groups or woodlands, and shrub masses, hedges and hedgerows[2] growing within or immediately adjacent to the site;

[1] 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.

[2] Ibid, 4.4.2.7

and recorded their locations, species, dimensions, ages, condition, and visual importance in accordance with BS 5837 recommendations.

2.4.2. 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 2**. The numbers assigned to the trees in the tree survey schedule correspond with those shown on the appended tree protection plan.

2.4.3. 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[3]. However, where it might be necessary to differentiate between specific trees within these groups, we also surveyed these individually.

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

2.4.5. 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.

2.4.6. We have 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.

2.5. Tree constraints

2.5.1. In line with the NPPF's presumption in favour of sustainable development, we have assessed whether any trees should be retained in the context of a proposed

[3] Ibid, 4.4.2.3

development. 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**"[4].

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**"[5].

2.5.5. The 'Root Protection Areas' (RPAs)[6] of the trees identified for retention were calculated in accordance with Section 4.6 of BS 5837; and were assessed taking account of factors such as the likely tolerance of a tree to root disturbance or damage, the morphology and disposition of roots as influenced by existing site conditions (including the presence of existing roads or structures), as well as soil type, topography and drainage. Where considered appropriate, the shapes of the RPAs (although not their areas) were modified based on these considerations, so that they reflect more accurately the likely root distribution of the relevant trees.

2.5.6. 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

[4] Ibid. 4.5.10.

[5] Ibid. 5.1.1.

[6] 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.

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[7].

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

2.5.8. 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.

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 several occasions during the design process. In this way, it has been ensured that the existing trees have made a significant contribution to the design of the proposed development, rather than the design having dictated which trees are to be removed.

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 the TCP, and produced the tree protection plan (TPP) presented at **Appendix 3.** This is based on the proposed site plan by ACG Architects, drawing no. 353-_SKE_220422_01.

[7] BS 5837, paragraph 5.2.2 Note 1.

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. 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 impacts[8]

[8] 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 87 individual trees, eight groups of trees, and six hedgerows 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 arboricultural character of the site can be defined as fields with predominantly native vegetative field boundaries. The trees are comprised of exclusively deciduous broadleaves that are growing in high density around the periphery of the two fields. The majority of specimens are native but there is a significant number of sycamore and also isolated non-natives (Norway maple).

3.1.3. The most commonly found species is ash, which along with sycamore form the most dominant species in the local landscape. The majority of trees are semi-mature with relatively few mature trees (12) and low numbers of over-mature and young trees. There are no veteran or ancient trees present. This is also reflected in the sizes of the trees, which are relatively small. The arboricultural character of the site is consistent with the surrounding landscape.

3.2. Assessment of suitability for retention

3.2.1. As noted above in Section 2.2, local planning policies require the retention of trees that **"contribute positively to an area's character and identity by creating or reinforcing local distinctiveness"**. The individuals and groups of trees within or adjacent to the site, whose attributes we consider meet these criteria, are as follows:

- the significant components of the row of trees (G11) growing to the south of Green Lane, which contribute to the green character of the road; and

- the small, wooded copse growing on the eastern boundary, readily visible from the road connecting Green Lane to Wendlebury Road.

3.2.2. Six individual trees (nos. 64, 862, 866, 911 and 1054-1055) have been assessed as category 'U'. These are trees that are unsuitable for retention, on the basis of them being 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. On site trees that need removing solely to accommodate the proposed development are not placed in this category. Category ‘U’ trees are indicated on the accompanying tree locations and protection plans by **bracketed red** numbers.

3.2.3. There are two category ‘A’ trees (the mature English oaks nos. 1052 and 1053) and 23 category 'B' specimens. The remaining 56 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 and hedgerows, one off-site group of trees (G2) has been assessed as category ’A’, six as category ‘B’, and the remaining seven 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, three individual trees (nos. 39, 73 & 1057) 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. 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
39	Ash	10m	500mm ivy	Semi-mature	C (12)
73	Ash	13m	180mm 3 stems @ 330mm	Semi-mature	C (12)
74	Field maple	11m	3 stems @ 120mm 290mm ivy est.	Semi-mature	C (12)
H3	Various	3.5m	Min 70mm Max 200mm Avg 170mm	Semi-mature	C (23)
H12	Various	Min 2m Max 4.5m	Min 6 stems @ 45mmest. Max 100mm	Semi-mature	C (12)

Table 2: Trees to be removed

4.1.3. As also shown in ***Table 2***, two hedgerows (H3 & H12) are to have small sections removed as part of the proposals.

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. None of the trees to be removed are mature specimens of species of large size: all the trees to be cleared are young, semi-mature or of small ultimate size. The

significance of this is threefold. Firstly, for obvious reasons mature trees tend to be larger in size and therefore are likely to be more visible and to make a greater contribution to the landscape. Secondly, mature trees are more likely to have formed associations with wildlife and to support other flora or fauna (for example, young trees infrequently contain splits, cracks or cavities that might provide roosting sites for bats); and thirdly, mature trees have a significantly greater capacity than smaller trees to actively sequestrate and store carbon[9]. Accordingly, the removal of no large mature trees on or adjacent to the site minimises the impacts on the benefits that mature trees provide in relation to smaller ones.

4.2.4. None of the individual trees to be removed are covered by a TPO (see 1.6.1 above); these are shown on the TPP and identified in ***Table 2*** above.

4.2.5. The proposed access into the site from Green Lane was subject to a detailed arboricultural impact assessment. The access point was selected to utilise an existing gap in the vegetative boundary trees along the road, as shown in ***Photograph 1*** below, and to enable the retention and protection of those trees that contribute to the character and appearance of the landscape (nos. 60 to 72).

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

Photograph 1: Google Street View Image showing the existing gap between G11 (to the left) and H12 (to the right) that is to be utilised for the site access

4.2.6. Accordingly, only a 15m section of vegetation (H12) that is composed of small trees (no greater than 13m in height) and dense bramble thicket is to be removed to accommodate the proposed access into the development site. Consequently, the impact on the character and appearance of Green Lane will be negligible.

4.2.7. Two further small sections of the internal hedgerow (H3) are to be removed to accommodate the drainage outfall in the southern section of the site, and the single lane access route connecting to the parking area in the east field of the site. The sections to be removed are no greater than 12m in length and will be mitigated by the retention of the remaining hedgerows.

4.2.8. The three individual trees to be removed are assessed as category 'C' specimens: 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.

4.2.9. The proposals incorporate considerable replacement tree planting, as shown on the Allen Pyke illustrative landscape masterplan (ref: 2930-LA-02 P01). The landscape masterplan demonstrates how the proposed scheme will provide a framework for the development of new arboricultural features within the centre of the

sites where there are currently no trees. This will provide a network of trees connecting to the existing boundary vegetation. Furthermore, the landscaping will strengthen the existing boundary vegetation by incorporating additional areas of mosaic scrub and woodland along with significant numbers of native standards adjacent to the site boundaries.

4.2.10. The tree planting strategy will mitigate the proposed removals, provide a net increase in tree numbers, improve the age class balance of the trees on site, enhance the local landscape, and establish a framework for the ongoing and long-term character of the site.

4.2.11. In the light of these considerations, and taking account of the numbers, sizes and locations of the trees to be retained, 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. 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 15m 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. ROOT PROTECTION AREA INCURSIONS

6.1. Details

6.1.1. Parts of the proposed development parcel batter and Green Lane footway will encroach within the RPAs of 11 trees to be retained. These are shown in ***Table 3*** below.

Tree no.	Species	Incursion	Extent of incursion	% of RPA
38	Common lime	Proposed 1 in 3 batter	0.4m^2	0.5%
40	Field maple	Proposed 1 in 3 batter	27.6m^2	20%
60	Sycamore	Proposed 1 in 3 batter	20.5m^2	5.2%
		Proposed Green Lane footway	61.8m^2	15.7%
61	Ash	Proposed 1 in 3 batter	8.9m^2	4%
		Proposed Green Lane footway	31.8m^2	14.5%
63	Sycamore	Proposed 1 in 3 batter	7.5m^2	3.4%
		Proposed Green Lane footway	32.2m^2	14.6%
65	Sycamore	Proposed 1 in 3 batter	6.6m^2	3.9%
		Proposed Green Lane footway	5.4m^2	3.2%
67	Sycamore	Proposed 1 in 3 batter	4.7m^2	3.4%
70	Sycamore	Proposed 1 in 3 batter	10.3m^2	10.1%
72	Ash	Proposed 1 in 3 batter	12.4m^2	11.7%
75	Ash	Proposed Green Lane footway	4.6m^2	7.7%
1058	Ash	Proposed 1 in 3 batter	3.5m^2	2.1%

Table 3: Proposed incursions within RPAs

6.2. Assessment

6.2.1. The incursions by parts of the proposed increase in levels and the footway into the RPAs of the 11 trees listed at ***Table 3*** extend no closer than 5.4m to the trunks, which equates to no more than 15.7% of individual RPAs. Any potential adverse impacts can be satisfactorily mitigated as set out below.

6.2.2. The incursions into the RPAs of trees nos. 60, 61, 63, 65 and 75 are by the proposed footway along the south side of Green Lane. As the footway needs to tie into the levels of the existing road, above soil solutions are not available and accordingly some degree of excavation will 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, sycamore and ash have been identified as moderate at tolerating root pruning and disturbance[10]. As these specimens are of average physiological condition, there is no reason to suggest that they will not be able to tolerate the cutting of roots within these sections of their RPAs.

6.2.4. The areas lost to encroachment within the RPAs of these five trees can be compensated for in the areas to the east and west of the trees, where there are areas of soft landscaping suitable for root growth, contiguous to the RPAs. There is likely to already be significant rooting within these areas, and as it is to remain as soft landscape, root growth can continue in the future. Therefore, there will be no net loss of suitable rooting area, and no foreseeable risk of future cumulative impacts, which will limit the negative impacts upon these trees and provide rooting space to compensate for the severance of roots required for the footway's construction.

6.2.5. The incursions into the RPAs of 11 trees listed in ***Table 3*** above are by the proposed 'ramp up' (1 in 3 batter) to the development parcel. These areas extend to no more than 15.7% of individual RPAs, so do not exceed the 20% maximum incursion into currently unsurfaced ground recommended in BS 5837[11].

6.2.6. The proposed batter is limited to the outer periphery of the RPAs, and typically does not extend further than 1.2m into the RPAs (and no greater than 2.2m), which will result in a gradual increase of levels from existing soil level to 400mm build up at the outer edge. As the batter is to be entirely above existing soil level, no excavation will be required.

6.2.7. The build-up will incorporate large, irregular particulates to create a material with high porosity and permeability that will ensure that air and water can penetrate through the material into the existing soil beneath. Furthermore, the machinery will work from outside of the RPAs to ensure that the soil within the RPAs is not compacted. 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.

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[10] MATHENY, N. P. and CLARK, J. R. (1998). Trees and Development. International Society of Arboriculture.

[11] BS 5837, paragraph 7.4.2.3.

6.2.8. Taking account of the extent of encroachment, the depth of build, species tolerance to disturbance, tree age and their physiological condition, there is no reason to suggest that these trees will not be able to tolerate the proposed soil build-up within their RPAs.

6.2.9. 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 3**.

6.2.10. 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. Details

7.1.1. In none of the proposed new dwellings does the fenestration of their main habitable rooms (living rooms, kitchens) exclusively and directly face trees within the shadow patterns[12] of which they are situated; that is, where proposed dwellings or apartments 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 or private gardens lie 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.

[12] 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 of the proposals on the existing trees concludes that no mature trees, no veteran or ancient trees, no category ‘A’ or ‘B’ 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 trees will represent only a very minor alteration to the main arboricultural features of the site and the overall arboricultural character of the site. As such the proposals will not have an adverse impact on the arboricultural character and appearance of the local landscape or the adjacent conservation area.

8.1.2. As no trees are to be pruned, and none of the proposed dwellings will be within 15m 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.

8.1.3. 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.

8.1.4. None of the proposed dwellings or private gardens 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 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. The proposals do not necessitate the removal of any mature trees of large ultimate size, which make the greatest contribution to carbon sequestration and storage, surface water run-off, biodiversity and landscape and air temperature and cleanliness; for all of which, appropriate space for their retention is provided. Accordingly, insofar as this relates to existing trees, the scheme can be seen to have taken a proactive approach to mitigating climate change and thereby complies with Paragraph 153 of the National Planning Policy Framework.

8.2.3. The retention of all the main arboricultural features of the site recognises and will maintain the local landscape, its countryside character, and the wider benefits of the existing trees that contribute to the character of the adjacent Chesterton Conservation Area, 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 of the NPPF.

8.3. Compliance with local planning policy

8.3.1. As the proposed development will retain and protect all trees that contribute to the area's character and local distinctiveness and incorporates significant tree planting resulting in a net increase in tree numbers within the site, it complies with Polices ESD10, ESD13 and ESD15 of the adopted Cherwell Local Plan 2011-2031 (July 2015).

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

Outline Arboricultural Method Statement

Outline arboricultural method statement

A1.1. Tree Protection Plan

A1.1.1. The TPP at **Appendix 3** 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, 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. 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. Site clearance

A1.3.1. 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.

A1.3.2. 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.

A1.4. Ground preparation

A1.4.1. 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).

A1.5. Tree protection fencing

A1.5.1. 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.

A1.5.2. 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.

A1.5.3. 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.

A1.5.4. 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.

A1.6. Manual excavation within RPAs

A1.6.1. 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, 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.

A1.7. Proposed build-up within RPAs

A1.7.1. Unacceptable damage to the roots and rooting environments of the trees to be retained during the construction of proposed 1 in 3 batter that encroach within RPAs will be avoided by building them above existing soil level, to avoid digging and thus severing of roots; and an appropriate build-up material to include large sized particulates of irregular shape to be used to promote permeability and porosity. All machinery to be located outside of the RPAs to prevent 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 red **cross-hatching** on the TPP.

APPENDIX 2

Tree Survey Schedule

SJA trees
ARBORICULTURAL PLANNING CONSULTANTS

17 CROSS ROAD
TADWORTH
SURREY KT20 5ST

Tel: (01737) 813058
E-mail: sja@sjatrees.co.uk

Directors: Simon R. M. Jones Dip. Arb. (RFS), FArborA., RCArborA. (Managing)
Frank P. S. Spooner BSc (Hons), MArborA, TechCert (ArborA)

Preliminary Tree Survey Schedule

Land South of Green Lane, Chesterton

August 2020

Tree Survey Schedule: Explanatory Notes

Land South of Green Lane, Chesterton

This schedule is based on a tree inspection undertaken by Nigel Kirby and Finn Cullerne of SJAtrees (the trading name of Simon Jones Associates Ltd.), on Wednesday 20th August 2020. Weather conditions at the time were overcast with persistent rain. Deciduous trees were in full 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.
Numbers correspond with numbering on topographical survey plan.

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.

6. Crown break.
Height above ground and direction of growth of first significant live branch.

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, and a crown showing retrenchment and a structure characteristic of the latter stages of life.
Ancient: Beyond the typical age range and with a very large 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.

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 morphological or pathological defects; but these are either remediable or do not put the tree at immediate or early risk of collapse.
Poor: Significant and irremediable morphological or pathological defects, such that there may be a risk of failure or collapse.
Hazardous: Significant and irremediable morphological or pathological defects, with a risk of imminent collapse.

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

12. Category.
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 contribute to the character and appearance of the local landscape, to amenity, or to 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 that are particularly good examples of their species, especially if rare or unusual.
(2) Trees, groups or woodlands of particular visual importance as arboricultural and/or landscape features.
(3) Trees, groups or woodlands of significant conservation, historical, commemorative or other value.

Category B: Trees of moderate quality with an estimated remaining life expectancy of at least 20 years.
(1) Trees that might be included in category 'A', but are downgraded because of impaired condition (e.g. presence of significant though remediable defects including unsympathetic past management and minor storm damage) such that they are unlikely to be suitable for retention for beyond 40 years; or trees lacking the special quality necessary to merit the category 'A' designation.
(2) Trees present in numbers, usually growing as groups or woodlands, such that they form distinct landscape features, thereby attracting a higher collective rating than they might as individuals; or trees present in numbers but situated so as to make little visual contribution to the wider locality.
(3) Trees with material conservation or other cultural value.

Category C: Trees of low quality with an estimated remaining life expectancy of at least 10 years, or young trees with a stem diameter below 150mm.
(1) Unremarkable trees of very limited merit or of such impaired condition that they do not qualify in higher categories.
(2) Trees present in groups or woodlands, but without this conferring on them significantly greater collective landscape value, and/or trees offering low or only temporary landscape benefits.

TREE SURVEY SCHEDULE

Land South of Green Lane, Chesterton

No.	Species	Height	Trunk diameter	Radial crown spread	Crown break	Crown clear-ance	Age class	Physio - logy	Structure	Comments	Cate gory
37	Field maple	10m	5 stems @ 120mme st.	N 3.75m E 2.5m S 3.25m W 3m	0.25m	0m	Semi-mature	Average	Poor	Off-site tree; multi-stemmed from base; tight compression forks with evidence of included bark; asymmetrical crown as suppressed by adjacent specimens; contributes to boundary screening; inessential component of group in which it stands; unremarkable tree of very limited merit.	C (1)
38	Common lime	10m	2 stems @ 285mm	3.75m	2m	2m	Semi-mature	Average	Indifferent	Off-site tree; small self-seeded and planted specimen; multi-stemmed from base; tight compression fork with evidence of included bark; readily visible from adjacent lane; contributes to boundary screening.	B (2)
39	Ash	10m	500mm ivy	N 5m E 5.25m S 4m W 3.75m	2m	E2m	Semi-mature	Average	Indifferent	Small self-seeded specimen; of only low-level screening value; heavily ivy-covered impeding inspection of trunk and base; inessential component of group in which it stands; unremarkable tree of very limited merit.	C (12)
40	Field maple	12m	300mm 3 stems @ 260mm	N 3m E 4m S 3.5m W 4m	0.5m	E0.1m	Semi-mature	Average	Indifferent	Multi-stemmed from base; tight compression forks with evidence of included bark; evidence of branches fusing to form natural bracing; contributes to boundary screening; readily visible from adjacent road; significant component of group in which it stands.	B (2)
60	Sycamore	17m	450mm 440mm 320mm 2 stems @ 430mm	N 7m E 7m SE 6m S 5m SW 5.5m W 6m	0.5m	0.25m	Mature	Average	Indifferent	Multi-stemmed from base; tight compression forks with evidence of included bark on central, codominant stems; readily visible from Green Lane; significant component of group in which it stands.	B (2)
61	Ash	17.5m	2 stems @ 330mm 250mm 370mm 260mm	N 6m E 4m S 6m W 7m	4m	S4m	Semi-mature	Average	Poor	Multi-stemmed from base; tight compression forks with evidence of included bark; readily visible from Green Lane; contributes to boundary screening; significant component of group in which it stands.	C (12)
62	Ash	16.5m	200mm 180mm 330mm	N 3.5m E 5.5m S 4.5m W 2.25m	4m	S3.5m	Semi-mature	Below average	Poor	Evidence of historic root plate movement; multi-stemmed from base; tight compression forks with evidence of included bark; mechanical wounding on trunk; contributes to boundary screening; inessential component of group in which it stands.	C (12)

No.	Species	Height	Trunk diameter	Radial crown spread	Crown break	Crown clear-ance	Age class	Physio - logy	Structure	Comments	Cate gory
63	Sycamore	18m	4 stems @ 260mm 200mm 290mm 320mm	N 5m E 4.75m S 4.5m W 3.25m	2m	S0.2m	Semi-mature	Average	Indifferent	Multi-stemmed from base; tight compression forks with evidence of included bark; contributes to boundary screening; heavily ivy-covered; readily visible from Green Lane; significant component of group in which it stands.	C (12)
64	Sycamore	17m	6 stems @ 200mme st.	4m	2m	4m	Semi-mature	Low	Poor	Moribund; multi-stemmed from base; practically dead tree.	U
65	Sycamore	17.5m	330mm 510mm	N 5.75m E 5m SE 5m S 4.5m W 3.75m	2m	S3.5m	Semi-mature	Average	Poor	Multi-stemmed from base; tight compression fork with evidence of included bark; readily visible from Green Lane; contributes to boundary screening; significant component of group in which it stands.	C (12)
66	Ash	16m	2 stems @ 290mm ivy	N 6m E 2.75m S 4m W 2m NW 1m	2m	0.5m	Semi-mature	Below average	Indifferent	Twin-stemmed from base, with union obscured by ivy and leaf litter; asymmetrical, almost one-sided crown as suppressed by adjacent specimens; contributes to boundary screening; inessential component of group in which it stands.	C (12)
67	Sycamore	17m	3 stems @ 240mm 2 stems @ 120mm 400mm	N 5.25m E 3.5m S 4.25m W 4m	1.5m	S0.5m	Semi-mature	Average	Poor	Multi-stemmed from base; tight compression forks with evidence of included bark; readily visible from Green Lane; contributes to boundary screening; significant component of group in which it stands.	C (12)
68	Ash	17m	160mm 140mm 300mm	N 6.5m E 2.25m S 4m W 4.5m	1.5m	S0.25m	Semi-mature	Below average	Poor	Multi-stemmed from base; slightly sparsely foliated; asymmetrical crown as suppressed by adjacent specimens; readily visible from Green Lane; contributes to boundary screening; inessential component of group in which it stands.	C (12)
69	Sycamore	17m	290mm ivy	N 3m E 2.5m S 3.75m W 2m	4m	S0.5m	Semi-mature	Average	Indifferent	Small self-seeded specimen; asymmetrical crown as suppressed by adjacent specimens; contributes to boundary screening; high crown; heavily ivy covered; inessential component of the group in which it stands.	C (12)
70	Sycamore	17m	270mm 390mm	N 5m E 3.25m S 4m W 3.25m	3m	0m	Semi-mature	Average	Indifferent	Twin-stemmed from base; tight compression fork with evidence of included bark; asymmetrical crown as suppressed by adjacent specimens; readily visible from Green Lane; contributes to boundary screening; significant 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
71	Field maple	16m	160mm 330mm	N 4.75m E 5m S 5.5m SW 4m W 2.5m	2m	0.15m	Semi-mature	Average	Indifferent	Mechanical wounding at base; internal heartwood exposed; tight compression fork with evidence of included bark; contributes to boundary screening; inessential component of group in which it stands.	C (12)
72	Ash	17m	3 stems @ 280mm	N 5.25m E 3.25m S 4.5m W 5.25m	4m	6m	Semi-mature	Average	Indifferent	Multi-stemmed from base; no evidence of significant tight compression forks with bark to bark contact; stems are tall, drawn-up and mutually suppressed; readily visible from Green Lane; significant component of group in which it stands.	C (12)
73	Ash	13m	180mm 3 stems @ 330mm	N 4.5m E 4.75m S 4.5m W 4.25m	4.5m	S4m	Semi-mature	Average	Indifferent	Decay at base; cavity at base; multi-stemmed from base; heavily ivy-covered; readily visible from Green Lane; contributes to boundary screening.	C (12)
74	Field maple	11m	3 stems @ 120mm 290mm ivyest.	N 3.5m E 1.5m S 3m W 4m	1.5m	S0.15m	Semi-mature	Average	Indifferent	Multi-stemmed from base; heavily ivy-covered; asymmetrical, partly one-sided crown as suppressed by adjacent specimens; contributes to boundary screening; inessential component of group in which it stands; unremarkable tree of very limited merit.	C (12)
75	Ash	13m	3 stems @ 210mm	N 4m E 1m S 4m SW 5.5m W 5.5m	2m	S3m	Semi-mature	Average	Poor	Multi-stemmed from base; tight compression fork with evidence of included bark; asymmetrical crown as suppressed by adjacent specimens; readily visible from Green Lane; contributes to boundary screening; inessential component of group in which it stands.	C (12)
76	Ash	14m	200mm 280mm	N 6.5m E 4m S 3.75m W 3.75m	3m	4m	Semi-mature	Average	Indifferent	Twin-stemmed from base; tight compression fork with evidence of included bark; asymmetrical crown as suppressed by adjacent specimens; readily visible from Green Lane; contributes to boundary screening.	C (12)
235	Ash	19m	425mm	N 7m E 2m S 1m W 5.5m	4m	N3m	Semi-mature	Average	Indifferent	Off-site tree; self-seeded specimen; asymmetrical, one-sided crown as suppressed by adjacent specimens; woodland edge individual; tree or group of moderate visual importance; contributes to boundary screening; readily visible from internal views to N and external views to S.	B (2)
236	Aspen	22m	570mm	N 6m E 3m S 3.5m W 4.75m NW 7m	4m	N3m	Mature	Average	Indifferent	Off-site tree; prominent buttress roots; single trunk; asymmetrical crown as suppressed by adjacent specimens; woodland edge individual; significant component of group in which it stands; tree or group of moderate visual importance; readily visible from internal views to N and external views to S.	B (12)

No.	Species	Height	Trunk diameter	Radial crown spread	Crown break	Crown clear-ance	Age class	Physio - logy	Structure	Comments	Cate gory
237	Ash	19m	2 stems @ 240mm 410mm ivy	N 7.25m E 3m S 2m W 2.5m	4.75m	N3.5m	Semi-mature	Average	Poor	Off-site tree; self-seeded specimen; twin-stemmed from base with tensile union; E subdominant stem, tight compression fork with bark to bark contact; detached and decayed FFB of suspected Inonotus hispidus at S base of trunk; one-sided crown as suppressed by adjacent specimens; woodland edge individual; inessential component of group in which it stands.	C (12)
238	Aspen	23m	440mm 360mm 530mm	N 9.5m E 10.5m S 7m W 3m	4m	N4m	Mature	Average	Indifferent	Off-site tree; three-stemmed from base; tight compression fork with evidence of included bark; drawn-up and suppressed; asymmetrical crown as suppressed by adjacent specimens; essential component of group in which it stands; tree or group of moderate visual importance; readily visible from internal views to N and external views to S.	B (2)
240	Aspen	23m	650mme st. 590mm 550mm	N 11m E 12m S 10m W 8m	6m	N4m	Mature	Average	Poor	Off-site tree; twin-stemmed from base; tight compression fork with evidence of included bark; single third trunk 2m E; stems drawn-up and mutually suppressed; essential component of group in which it stands; readily visible from internal views to N and external views to S; asymmetrical crown as suppressed by adjacent specimens.	B (2)
242	Ash	7m	240mm ivy	NE 4m SE 3m SW 3m NW 3.2m	0.5m	3m	Semi-mature	Average	Moderate	Small hedgerow specimen; of moderate quality, but currently of low value due to small size; sparse foliage, above average deadwood and small leaflets in outer canopy indicative of incipient infection with ash dieback; readily visible from Green Lane to the east but not a significant component of the character of the road.	C (1)
244	Ash	10.5m	450mm ivy 220mm	NE 5m SE 3.8m S 6m SW 5.9m NW 5m	0.5m	2.5m	Semi-mature	Below average	Indifferent	Twin-stemmed from 0.5m with tensile union; dominant stem, upright and ivy-covered; subordinate stem extends horizontally for 4m before correcting to upright; sparse outer canopy; significant component of hedgerow but of low quality.	C (123)
245	Field maple	6.5m	245mm 230mm	3.3m	0m	0m	Semi-mature	Average	Moderate	Twin-stemmed from ground level, tensile union; of no more than moderate quality, but currently of low value due to small size.	C (1)
248	Ash	9m	3 stems @ 140mm 4 stems @ 180mm	NE 4.3m SE 3.5m SW 4.2m NW 4m	0.5m	3m	Semi-mature	Below average	Indifferent	Coppiced ash within hedgerow; sparse outer canopy with small leaflets, indicative of physiological stress or incipient infection with ash dieback; of limited potential, quality and value. Inessential component of the hedgerow within which it stands.	C (23)
309	Field maple	4.5m	230mm 315mm 2 stems @ 220mm 150mm	N 5.6m E 5m S 5m W 3.5m NW 4.8m	0m	0.5m	Semi-mature	Average	Moderate	Coppiced field maple; of moderate quality, but currently of low value due to small size.	C (12)

No.	Species	Height	Trunk diameter	Radial crown spread	Crown break	Crown clear-ance	Age class	Physio - logy	Structure	Comments	Cate gory
310	Ash	9m	255mm 2 stems @ 180mm 230mm	NE 6m SE 2.5m SW 5.5m NW 2.5m	0.5m	3m	Semi-mature	Low	Indifferent	Hedge laid ash with large bole extending inline with the hedge with multiple small stems; canopy showing extensive signs of ash dieback; of very limited potential and value.	C (3)
311	Ash	11m	230mm 2 stems @ 200mm 250mm 2 stems @ 180mm 290mm	NE7.3m SE6.2m SW6.7m NW3.5m	0.5m	3.5m	Semi-mature	Below average	Indifferent	Hedge laid ash with large bole extending inline with the hedge with semi-mature small stem regrowth; of moderate quality but limited value due to small size.	C (123)
312	Field maple	5m	225mm	2m	0.5m	0.5m	Semi-mature	Average	Moderate	Of moderate quality, but currently of low value due to small size.	C (1)
313	Ash	8.5m	220mm 2 stems @ 100mm	2.3m	0.5m	2m	Semi-mature	Average	Indifferent	Coppiced ash with three stems with tight compression union; unremarkable tree of very limited merit; inessential component of the hedgerow.	C (1)
314	Ash	10m	230mm 200mm 2 stems @ 240mm all ivy	NE 5.5m SE 3m SW 6m NW 3.5m	0.5m	3.5m	Semi-mature	Below average	Indifferent	Hedge laid ash with large bole extending inline with the hedge but small stems; heavily ivy-covered impeding full inspection; sparse outer canopy; of moderate quality but of limited landscape value due to small size.	C (123)
315	Ash	8m	2 stems @ 220mm 3 stems @ 135mm all ivy	NE 5m SE 3.5m SW 5m NW 3m	0.5m	2m	Semi-mature	Average	Indifferent	Hedge laid ash with large bole extending inline with the hedge but small stems; heavily ivy-covered impeding full inspection; sparse outer canopy; of moderate quality but of limited landscape value due to small size.	C (1)

No.	Species	Height	Trunk diameter	Radial crown spread	Crown break	Crown clear-ance	Age class	Physio - logy	Structure	Comments	Cate gory
316-318	Ash	12m	#T316 3 stems @ 210mm 4 stems @ 160mm #T317 250mm 2 stems @ 200mm 300mm ivy #T318 5 stems @ 215mm	NE 5.5m SE 3m SW 5.5m NW 4.5m	0m	2.5m	Semi-mature	Average	Indifferent	Row of three coppiced ash; all multi-stemmed with semi-mature regrowth; significant component of hedge, visible in long range views from N but of limited quality; sparse foliage, above average deadwood and small leaflets in outer canopy indicative of incipient infection with ash dieback. of short term potential.	C (23)
398	Goat willow	7m	2 stems @ 250mm 2 stems @ 160mm 3 stems @ 220mm	NE 5.6m SE 5.3m SW 6m NW 5m	0m	1.5m	Semi-mature	Average	Moderate	Multi-stemmed from ground level with tight compression forks; of no more than moderate quality, but currently of low value due to small size.	C (1)
399	Ash	7.5m	350mmest.	NE 5.5m SE 5m SW 5m NW 5m	3m	3m	Semi-mature	Average	Moderate	Off-site tree; no access due to dense undergrowth so measurements estimated; of no more than moderate quality, but currently of low value due to small size.	C (1)
400	English oak	9m	880mm ivy	NE 4m SE 4.5m SW 4.7m NW 4m	2m	0.5m	Mature	Average	Moderate	Heavily ivy-covered impeding full inspection; 1.5m vertical wound on S trunk with good woundwood response; large diameter trunk with small, squat canopy indicative of either pollard or trunk failure; limited landscape impact due to small canopy.	C (123)

No.	Species	Height	Trunk diameter	Radial crown spread	Crown break	Crown clear-ance	Age class	Physio - logy	Structure	Comments	Cate gory
859	Ash	6m	255mm	NE 5m SE 3m SW 0.5m NW 3m	2.5m	2m	Semi-mature	Average	Moderate	Of moderate quality, but currently of low value due to small size.	C (1)
860-861	Ash	6m	#T860 110mm #T861 230mm 120mm	NE 3.5m SE 3m SW 1m NW 3m	2m	2m	Semi-mature	Average	Moderate	Two small ash of no more than moderate quality, but currently of low value due to small size.	C (1)
862	Ash	10m	220mm 330mm all est.	NE 7.6m SE 5m SW 3m NW 5m	0m	2m	Semi-mature	Low	Poor	Off-site tree; no access to base due to ditch and fencing preventing access; sparse canopy, extensive symptoms of ash dieback, small leaflets and significant tip dieback, consistent with ash dieback; of very limited potential, quality and value.	U (1)
863-865	Crack willow	13m	#T863 620mm #T864 630mm #T865 435mm	5.5m	1m	0.5m	Mature	Average	Indifferent	Group of three crack willow; trunk diameters of 863 and 864 measured at ground level to avoid trunk bulge as these specimens have been historically pollarded at 2m; mature specimens with limited future potential; tight compressive main unions; storm damage evident in crowns of up to 200mm diameter in crown.	C (23)
866	Crack willow	14m	2 stems @ 510mm 520mm	N 6m E 4m S 10m W 8m	0m	0.5m	Over-mature	Average	Hazardous	Multi-stemmed over mature willow, the two main unions at 0.5m have split apart resulting in large stems caught up in adjacent trees.	U (1)
868	Ash	8m	2 stems @ 300mmest.	N 5m E 5m S 5m W 5.4m	0m	2m	Semi-mature	Average	Moderate	Off-site tree; small semi-mature ash growing within dense hedge, no access to trunk: Of no more than moderate quality; of limited value due to short height.	C (1)
905	Sycamore	7.5m	130mm ivy	N 3.5m E 2.5m S 2m W 2m	2m	0.5m	Young	Below average	Indifferent	Heavily ivy-covered; spare canopy; unremarkable tree of very limited merit.	C (3)
906	Norway maple	9m	245mm 360mm all ivy	N 5.3m E 5.1m S 3.6m W 3.1m	1m	2m	Semi-mature	Average	Moderate	Heavily ivy-covered impeding full inspection; twin-stemmed from 1m, tensile union; short, squat canopy form limiting landscape value; of some screening value in views from N and E.	C (12)

No.	Species	Height	Trunk diameter	Radial crown spread	Crown break	Crown clear-ance	Age class	Physio - logy	Structure	Comments	Cate gory
907	Common lime	9m	405mm	N 4.3m E 3.5m S 3.6m S W1.5m W 3.9m	2m	1.5m	Semi-mature	Average	Moderate	SW canopy pruned back from LV cables and pylon; partially failed branch at 3m, resting on ground; no further significant defects observed; canopy visible in views from N; inessential component of group in which it stands	C (1)
908	Ash	14m	370mm	N 6m E 3.4m S 4.8m W 5.7m	2.5m	3m	Semi-mature	Average	Moderate	No defects at base; main unions a mix of tension and compression forks; co-dominant canopy; no incipient signs of ash dieback; significant component of group in which it stands; screened in views from public footpath and road by surrounding trees.	B (1)
910	Ash	13m	450mm ivy	N 4m E 2.9m S 6.1m W 7m	1.5m	2m	Semi-mature	Average	Moderate	No defects at base; ivy-covered; main unions a mix of tension and compression forks; suppressed canopy to the E; no incipient signs of ash dieback; significant component of group in which it stands; screened in views from public footpath and road by surrounding trees.	B (1)
911	Unidentifiable	8m	350mmest.	4m	1m	1m	Over-mature	Dead	Dead	Dead tree.	U (3)
913	Sycamore	11.5m	515mm ivy	N 4m E 4m S 6.3m W 5.6m	2m	0.5m	Mature	Average	Moderate	Heavily ivy-covered impeding full inspection; main unions tensile; of no more than moderate quality; significant component of group in which it stands, visible in views across fields to W: screened in all other views by surrounding trees.	B (1)
942	Ash	12m	495mm ivy	N 5.5m E 2.9m S 6.4m W 6m	2m	1.5m	Semi-mature	Below average	Moderate	Off-site tree; heavily ivy-covered; twin-stem from 2m with tight compression fork; sparse canopy, above average deadwood, consistent with ash dieback; readily visible from road but not a significant feature.	C (3)
943	Field maple	8m	120mm 160mm 170mm 130mm all ivy	N 3.6m E 4m S 2.5m W 3.8m	0m	0.5m	Semi-mature	Average	Moderate	Four-stemmed from ground level; heavily ivy-covered impeding full inspection; of no more than moderate quality but of limited impact due to small size.	C (1)
944	Beech	9.5m	205mm 200mm	N 3.5m NE 4.7m E 4.5m S 3m W 4m NW 4.5m	1m	0.5m	Semi-mature	Average	Poor	Small suppressed specimen with twin-stem at 1m with tight compression fork and evidence of a branch bark inclusion; of low quality and value.	C (3)
945	Field maple	8m	290mm ivy	N 4.7m E 3.5m S 2.8m W 5m	0m	0.5m	Semi-mature	Average	Moderate	Small suppressed specimen at group edge; heavily ivy-covered; limited value due to small size.	C (1)

No.	Species	Height	Trunk diameter	Radial crown spread	Crown break	Crown clear-ance	Age class	Physio - logy	Structure	Comments	Cate gory
946	Ash	13m	300mm 235mm	N 7.1m E 0.5m S 4.4m W 6.2m	1m	6m	Semi-mature	Below average	Moderate	Twin-stemmed from 1m with tight compression fork; sparse foliage, above average deadwood and small leaflets in outer canopy indicative of potential incipient infection with ash dieback.	C (23)
947	Ash	14m	320mm 225mm	N 4.8m E 3.8m S 5.7m W 2.9m	1m	6m	Semi-mature	Below average	Moderate	Twin-stemmed from 1m with tensile fork; sparse foliage, above average deadwood and small leaflets in outer canopy indicative of potential incipient infection with ash dieback; significant component of group in which it stands.	C (23)
948	Ash	13m	295mm	N 2m E 5.6m S 4m W 2.9m	3.5m	6m	Semi-mature	Low	Moderate	Small specimen with sparse foliage, above average deadwood, significant tip dieback and small leaflets in outer canopy consistent with infection with ash dieback; inessential component of group in which it stands.	C (23)
949	Ash	12m	360mm	N 7.1m E 7m S 0.5m W 3.1m	2m	2.5m	Semi-mature	Average	Moderate	No significant defects at the base; single slightly leaning trunk; woodland edge specimen with one-sided canopy; no signs of incipient ash dieback. Significant component of group in which it stands; visible in views from E and N.	B (2)
964	Purple sycamore	12.5m	535mm ivy	N 4.4m E 7.3m S 5.4m W 4m	1.5m	1m	Mature	Average	Moderate	No significant defects at base; multi-stemmed from 1.7m with tensile forks; ivy-covered to 4m; deadwood typical of species age and location; co-dominant canopy; significant component of group in which it stands; readily visible from public footpath and road to E.	B (1)
1052	English oak	20m	1335mm	N 9.8m E 8.5m S 8m W 8.4m	2m	15m	Mature	Average	Moderate	Off-site tree; no significant defects at base; heavily ivy-covered impeding full inspection; main unions tensile; dominant canopy; evidence of stag heads across the W and E canopy but foliar density, leaf size and annual extension growth typical of species; no signs of trunk hollowing; no visible evidence of cavities, large wounds, animal activity or of fungal activity; readily visible from footpath and road significant feature of local landscape.	A (23)
1053	English oak	18m	1105mm	N 8.1m E 8m S 9.5m W 11.1m	4m	0.5m	Mature	Average	Good	Off-site tree; prominent basal flare; single upright trunk to 4m where it becomes triple-stemmed with tensile unions; remaining main unions tensile; deadwood typical of species and age; minor stag head to E; of high quality; readily visible from footpath; contributes to the character of the local area; W canopy extends over site by 5.5.	A (1)
1054-1055	Ash	15m	#T1054 600mmest. #T1055 450mm	6m	4m	3m	Over-mature	Low	Poor	Two off-site ash's with poor structural and physiological condition; no access as in adjacent field; readily visible in long range views from residential development to the N.	U (3)

No.	Species	Height	Trunk diameter	Radial crown spread	Crown break	Crown clear-ance	Age class	Physio - logy	Structure	Comments	Cate gory
1056	English oak	16.5m	970mm	N 6.9m E 5.5m S 6.5m W 6.5m	2m	0.5m	Over-mature	Below average	Moderate	Off-site tree; 300mm wide fungal bracket on W trunk base, consistent with degraded bracket of *Ganoderma applanatum/australe* ; high variance in tone for 350mm of circumference around bracket; prominent basal flare, indicative of hollow trunk; single up right trunk; epicormic growth from trunk to upper canopy; main union ensile; outer canopy has reduced foliar density. Readily visible across fields and from footpath to E of site. Essential component of the group in which it stands.	B (23)
1057	Ash	17m	160mm 280mm	N 0.5m E 5m SE 4.5m S 3m W 0.5m	3m	4m	Semi-mature	Average	Indifferent	Twin-stemmed from base, tensile union present; heavily ivy-covered; canopy entirely offset from base; contributes to boundary screening; glimpsed from Green Lane; inessential component of group in which it stands.	C (12)
1058-1062	Norway maple	12m 10m 11m 11m 12m	3 stems @ 230mm est. 7 stems @ 230mm est. 3 stems @ 240mm 4 stems @ 200mm est. 4 stems @ 230mm 2 stems @ 200mm 2 stems @ 310mm	4m	2m	0.75m	Semi-mature	Average	Indifferent	Off-site trees; row of closely planted specimens, designed to form a hedge or screen; readily visible from adjacent road; contributes to boundary screening; multi-stemmed, many with tensile yet acute unions; many with tight compression forks with evidence of included bark; multi-stemmed from base.	B (2)

No.	Species	Height	Trunk diameter	Radial crown spread	Crown break	Crown clear-ance	Age class	Physio - logy	Structure	Comments	Cate gory
1063-1064	Common lime	#T1063 13m #T1064 12.5m	#T26 4 stems @ 200mm #T27 460mm	3.75m	2m	2m	Semi-mature	Average	Indifferent	Small self-seeded and planted specimens; multi-stemmed from base; tight compression fork with evidence of included bark; readily visible from adjacent lane; contributes to boundary screening.	B (2)
1065	Common lime	9m	330mm	3m	2m	1m	Semi-mature	Average	Indifferent	Small ornamental tree; mechanical wounding on trunk, nearly fully occluded; readily visible from adjacent road; contributes to boundary screening.	B (1)
1066	English oak	10m	390mm	N 4m E 5m S 6m W 4.75m NW 5m	2.25m	1.75m	Semi-mature	Average	Moderate	Small ornamental tree; single trunk; many occluded pruning wounds on trunk indicative of historic crown lifting; readily visible from adjacent road; contributes to boundary screening; of moderate quality, but currently of reduced value due to small size.	B (1)
1067	Norway maple	12m	280mm 140mm 300mm	4m	2m	E2m	Semi-mature	Average	Poor	Small self-seeded specimen; multi-stemmed from base; tight compression forks with evidence of included bark; of only low-level screening value; readily visible from adjacent road; contributes to boundary screening.	C (12)
1068	Ash	10m	2 stems @ 190mm	N 4.25m E 4m S 4m W 2m	2m	E2.25m	Semi-mature	Average	Poor	Small self-seeded specimen; twin-stemmed from 1m; tight compression fork with evidence of included bark; contributes to boundary screening; inessential component of group in which it stands.	C (12)
1069	Ash	15m	3 stems @ 320mm ivy	N 6m NE 5.75m E 5.5m S 6.5m W 6m	2m	E3m	Semi-mature	Average	Indifferent	Three-stemmed from base; tight compression fork with evidence of included bark; small self-seeded specimen; contributes to boundary screening; inessential component of group in which it stands.	C (12)
1070	Ash	9m	200mm	2.75m	2m	2m	Semi-mature	Average	Indifferent	Off-site small ornamental tree; readily visible from adjacent road; of only low-level screening value.	B (1)
G1	Various	Min 6m Max 14m	Min 200mm Max 535mm Avg 330mm	5m	1m	1m	Semi-mature	Average	Indifferent	Group of trees comprised of sycamore, Norway maple and ash standards with field maple, hazel, crab apple and hawthorn understorey; numerous dead trees within group and several ash showing significant tip dieback consistent with ash dieback; individuals of variable quality but the sum of the group positively contributes to the character of Green Lane and footpath to the E and provides a strong screen.	B (23)

No.	Species	Height	Trunk diameter	Radial crown spread	Crown break	Crown clear-ance	Age class	Physio - logy	Structure	Comments	Cate gory
G2	Various	21m	Min 300mmest. Max 550mmest. Avg 500mm	6m	3m	5m	Various	Average	Moderate	Off-site belt of trees growing within the Bruern Abbey School grounds, adjacent to the road; comprised of predominantly poplar with some ash, sycamore, horse chestnut and field maples; large specimens with spreading canopies extending over the road; significant feature of Green Lane and the local area.	A (2)
G3	Various	Min 5m Max 16m	Min 120mm Max 970mm Avg 450mm	5m	1m	1m	Various	Average	Indifferent	Group of trees in S corner of the site, extends off-site into adjacent field; comprised of predominantly crack willow with some pockets of ash and one large oak standards with understorey of blackthorn, field maple and hawthorn; individuals of generally low quality but the group is readily viable in long range views from N, E and S.	B (2)
G11	Various	Min 15m Max 17.5m	Min 75mm Max 480mm	3.75m	2.75m	0.25m	Semi-mature	Average	Indifferent	Row of closely growing specimens, forming a hedge or screen; tree or group of moderate visual importance; readily visible from Green Lane; contributes to boundary screening.	B (2)
G12	Various	Min 3m Max 7m	Min 75mm Max 2 stems @ 200mm ivyest.	3m	0.5m	S0.15m	Semi-mature	Average	Indifferent	Row of closely growing specimens, forming a hedge or screen; trees displaying morphological and physiological features consistent with size, age, species and location; tight compression forks with evidence of included bark; heavily ivy-covered; readily visible from Green Lane; contributes to boundary screening; species include hawthorn, myrobalan plum, field maple; field maple, dominant species.	B (2)
G13	Various	Min 2.5m Max 5m	Min 8 stems @ 45mmest. Max 150mmest.	2.75m	0.15m	0.15m	Semi-mature	Average	Indifferent	Row of closely growing specimens, forming a hedge or screen; of only low-level screening value; contributes to boundary screening; species include field maple, elder, bramble, myrobalan plum.	C (12)
G14	Various	Min 2m Max 12m	Min 6 stems @ 45mmest. Max 300mm	3m	0.25m	0.1m	Semi-mature	Average	Indifferent	Species include Norway maple, elm, bramble, field maple, myrobalan plum, flowering cherry, common lime, ash; row of closely planted and self-seeded specimens, designed to form a hedge or screen; many multi-stemmed from base; tight compression forks with evidence of included bark; aerodynamic group with meshing crowns providing companion shelter; contributes to boundary screening.	B (2)

No.	Species	Height	Trunk diameter	Radial crown spread	Crown break	Crown clear-ance	Age class	Physio - logy	Structure	Comments	Cate gory
G15	Various	Min 1m Max 2.5m	Min 25mm Max 75mm	2m	0.1m	0.5m	Young	Average	Indifferent	Row of closely growing specimens, forming a hedge or screen; N half significantly more dilapidated, fractured and of lower height than S half; N half of only low-level screening value; S half contributes more to boundary screening and begins forming arboricultural feature of the site; species include field maple, elder, hawthorn; fractured hedgerow; inessential component of wider landscape.	C (1)
H1	Various	Min 2.5m Max 5m	Min 95mm Max 230mm	3m	0m	0m	Various	Average	Moderate	Field boundary hedgerow; comprised of ash, hawthorn, blackthorn, elm and field maple with undergrowth of ivy and bramble; of no more than moderate quality; hedgerow helps to define the boundary but due to its limited size, it has a limited impact on the local landscape.	C (123)
H2	Various	Min 2m Max 5m	Min 70mm Max 230mm Avg 150mm	3m	0m	0m	Various	Average	Moderate	Field boundary hedgerow; comprised of ash, hawthorn, blackthorn, elder, goat willow and crab apple with bramble, rose and ivy understorey; hedgerow helps to define the boundary but due to its limited size, it has a limited impact on the local landscape.	C (23)
H3	Various	3.5m	Min 70mm Max 200mm Avg 170mm	3m	0m	0m	Semi-mature	Average	Indifferent	Field boundary hedgerow comprised of hazel, hawthorn, field maple and ash with sparse sections to the SE; hedgerow has a different character with only one oak standard, lower species diversity and more hazel dominance than the other hedgerows on site.	C (23)
H4	Various	5m	Min 90mm Max 300mm Avg 150mm	4m	0m	0m	Various	Average	Moderate	Field boundary hedgerow; comprised of field maple, ash, hawthorn, blackthorn and hazel with understorey of bramble, rose and ivy; of moderate quality; visible in long-range views to N and screens the site in views from the S.	B (13)
H11	Field maple	Min 2m Max 3.5m	Min 45mm Max 75mm	1.75m	0.25m	0m	Semi-mature	Average	Indifferent	Row of closely growing specimens, forming a hedge or screen; aerodynamic group with meshing crowns providing companion shelter; broken and sporadic gaps; of only low-level screening value; removal justifiable subject to suitable alternative replacement boundary screening; spp. F.map, hazel,rose,elder,ashsycamore, bramble, myrobalan plum; species include field maple, elm, ash, hazel, sycamore, bramble.	C (12)
H12	Various	Min 2m Max 4.5m	Min 6 stems @ 45mmest. Max 100mm	2.25m	0.15m	0.25m	Semi-mature	Average	Indifferent	Row of closely growing specimens, forming a hedge or screen; self-sown understorey hedge; contributes to boundary screening; trees and shrubs displaying morphological and physiological features consistent with size, age, species and location; species include sycamore, ash, hawthorn, field maple and bramble.	C (12)

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***
37	Field maple	32.6m²	3.2m
38	Common lime	73.5m²	4.8m
39	Ash	113.1m²	6.0m
40	Field maple	132.5m²	6.5m
60	Sycamore	392.8m²	11.2m
61	Ash	219.3m²	8.4m
62	Ash	82.0m²	5.1m
63	Sycamore	221.2m²	8.4m
64	Sycamore	108.6m²	5.9m
65	Sycamore	166.9m²	7.3m
66	Ash	76.1m²	4.9m
67	Sycamore	139.5m²	6.7m
68	Ash	61.2m²	4.4m
69	Sycamore	38.0m²	3.5m
70	Sycamore	101.8m²	5.7m
71	Field maple	60.8m²	4.4m
72	Ash	106.4m²	5.8m
73	Ash	162.5m²	7.2m
74	Field maple	57.6m²	4.3m
75	Ash	59.9m²	4.4m
76	Ash	53.6m²	4.1m
235	Ash	81.7m²	5.1m
236	Aspen	147.0m²	6.8m
237	Ash	128.2m²	6.4m
238	Aspen	273.3m²	9.3m
240	Aspen	485.5m²	12.4m
242	Ash	26.1m²	2.9m
244	Ash	113.5m²	6.0m
245	Field maple	51.1m²	4.0m
248	Ash	84.0m²	5.2m
309	Field maple	122.8m²	6.3m
310	Ash	82.7m²	5.1m
311	Ash	151.3m²	6.9m
312	Field maple	22.9m²	2.7m
313	Ash	30.9m²	3.1m
314	Ash	94.1m²	5.5m
315	Ash	68.5m²	4.7m
316-318	Ash	106.2m² 105.2m² 104.6m²	5.8m 5.8m 5.8m
398	Goat willow	141.6m²	6.7m
399	Ash	55.4m²	4.2m
400	English oak	350.3m²	10.6m
859	Ash	29.4m²	3.1m

860-861	Ash	5.5m² 30.4m²	1.3m 3.1m
862	Ash	71.2m²	4.8m
863-865	Crack willow	173.9m² 179.6m² 85.6m²	7.4m 7.6m 5.2m
866	Crack willow	357.7m²	10.7m
868	Ash	81.4m²	5.1m
905	Sycamore	7.6m²	1.6m
906	Norway maple	85.8m²	5.2m
907	Common lime	74.2m²	4.9m
908	Ash	61.9m²	4.4m
910	Ash	91.6m²	5.4m
911	Unidentifiable	55.4m²	4.2m
913	Sycamore	120.0m²	6.2m
942	Ash	110.8m²	5.9m
943	Field maple	38.8m²	3.5m
944	Beech	37.1m²	3.4m
945	Field maple	38.0m²	3.5m
946	Ash	65.7m²	4.6m
947	Ash	69.2m²	4.7m
948	Ash	39.4m²	3.5m
949	Ash	58.6m²	4.3m
964	Purple sycamore	129.5m²	6.4m
1052	English oak	706.9m²	15.0m
1053	English oak	552.4m²	13.3m
1054-1055	Ash	162.9m² 91.6m²	7.2m 5.4m
1056	English oak	425.7m²	11.6m
1057	Ash	47.0m²	3.9m
1058-1062	Norway maple	86.9m²	5.3m
1063-1064	Common lime	95.7m²	5.5m
1065	Common lime	49.3m²	4.0m
1066	English oak	68.8m²	4.7m
1067	Norway maple	85.0m²	5.2m
1068	Ash	32.7m²	3.2m
1069	Ash	139.0m²	6.7m
1070	Ash	18.1m²	2.4m
G1	Various	129.5m²	6.4m
G2	Various	136.8m²	6.6m
G3	Various	425.7m²	11.6m
G11	Various	104.2m²	5.8m
G12	Various	18.1m²	2.4m
G13	Various	10.2m²	1.8m
G14	Various	40.7m²	3.6m
G15	Various	2.5m²	0.9m
H1	Various	23.9m²	2.8m
H2	Various	23.9m²	2.8m
H3	Various	18.1m²	2.4m
H4	Various	40.7m²	3.6m
H11	Field maple	2.5m²	0.9m
H12	Various	4.5m²	1.2m

APPENDIX 3
TREE PROTECTION PLAN

Arboricultural Impacts: Summary

(For details, see below)

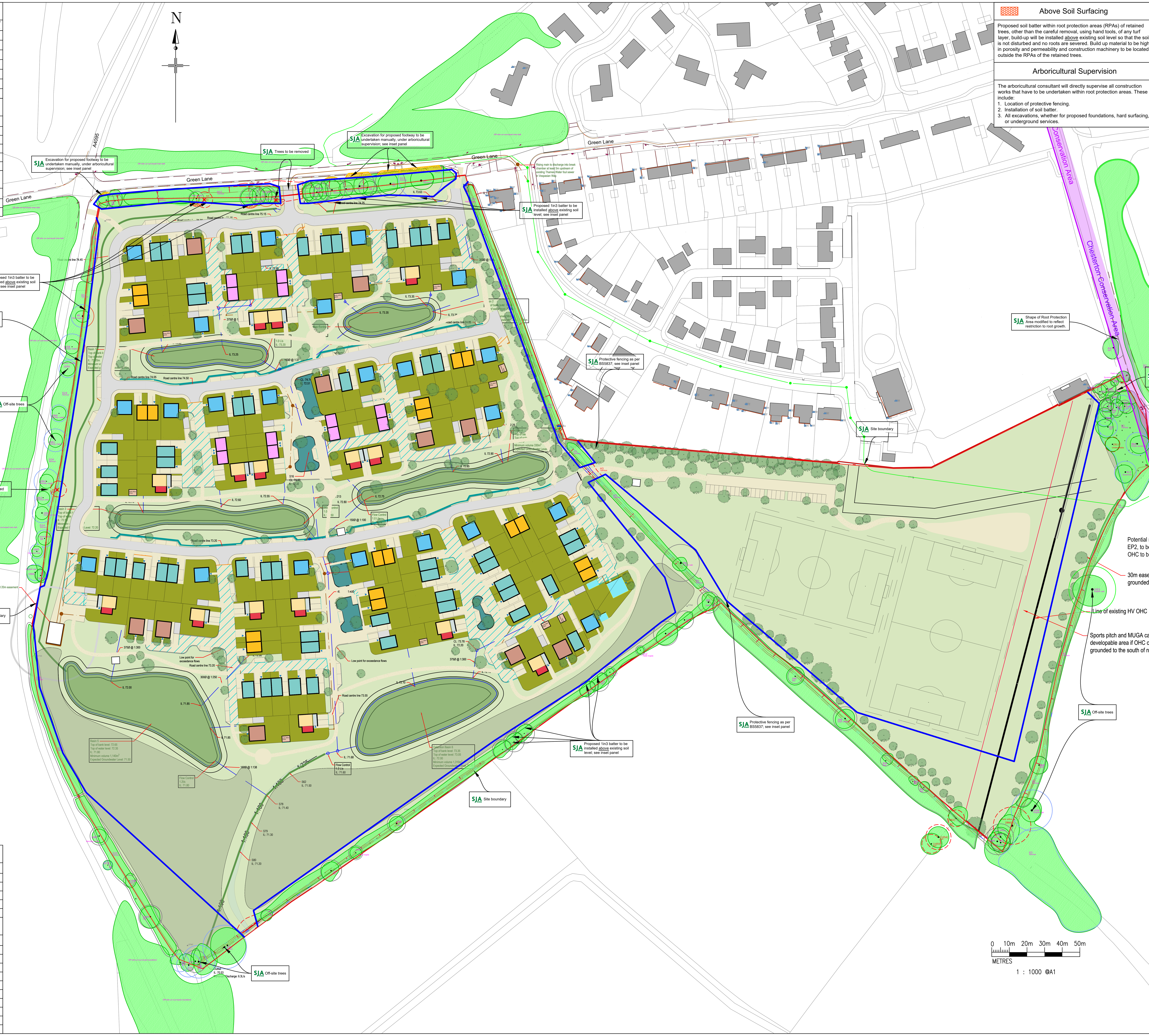
Impact	No. of Trees
Trees to be removed	3
Groups of trees to be partially removed	2
TPO trees to be removed	0
Trees to be pruned	0
Trees where manual excavation needed within RPAs	5
Trees where soil build-up is needed within RPAs	11
Trees with proposed underground services within RPAs	0

Trees to be Removed

No	Species	Category
39	Ash	C (12)
73	Ash	C (12)
74	Field maple	C (12)
H3	Various (partial removal)	C (23)
H12	Various (partial removal)	C (12)

Total numbers of trees to be removed

Category	No. of trees	Category	No. of trees
A	0	B	0
C	3 + 2g	U	0



Above Soil Surfacing

Proposed soil batter within root protection areas (RPAs) of retained trees, other than the careful removal, using hand tools, of any turf layer, build-up will be installed above existing soil level so that the soil is not disturbed and no roots are severed. Build up material to be high in porosity and permeability and construction machinery to be located outside the RPAs of the retained trees.

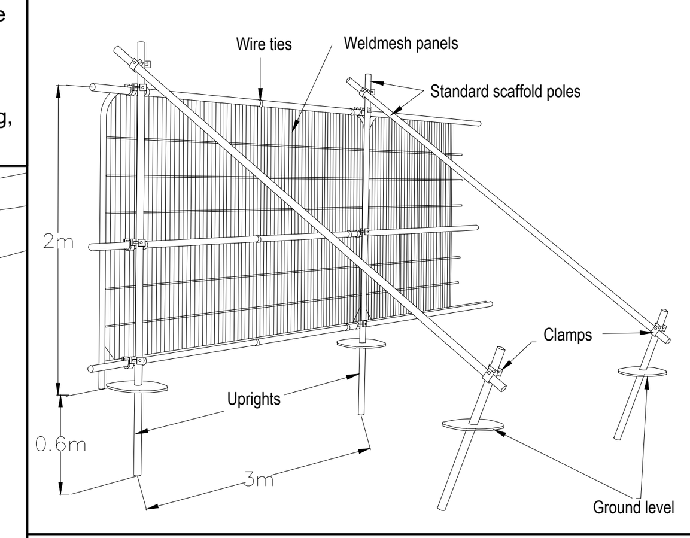
Arboricultural Supervision

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

1. Location of protective fencing.
2. Installation of soil batter.
3. All excavations, whether for proposed foundations, hard surfacing, or underground services.

Protective Fencing

To be erected prior to the commencement of all works on site, and retained in place throughout construction. To comprise either 2.4m wooden site hoarding; or a 2m high scaffolding framework, with uprights at maximum 3m spacings, every other one braced to the ground with 45 degree struts; supporting standard anti-climb 'Heras' welded mesh fence panels secured with anti-lift devices to concrete or plastic bases pinned to the ground by scaffold uprights sunk to a minimum depth of 600mm; individual panels fixed to each other with at least 2 clamps and to scaffolding with heavy-duty cable ties. "TREE PROTECTION ZONE - KEEP OUT" or similar notices to be attached to every fifth panel.



TREE PROTECTION FENCING as shown in BS 5837: 2012, Section 6.2.2 & Figure 2.

Manual Excavation

Within root protection areas the first 750mm depth of any excavation, whether for proposed foundations, hard surfacing, or underground services shall be undertaken by hand under arboricultural supervision. The soil will be loosened with a pick or fork, and then will be cleared from roots with a compressed air soil pick. All roots will be cut cleanly with a hand saw or secateurs. The edge of the excavation closest to the trees will be covered with hessian sacking to prevent drying out, and if necessary be shuttered with an appropriate material to prevent soil collapse. Where appropriate, the soil beneath this depth may be sheet piled; and deeper excavation may be undertaken by a machine provided it works from outside the root protection areas.

Trees that require manual excavation within RPAs

No.	Species	Type of structure
60	Sycamore	Proposed Green Lane footway
61	Ash	Proposed Green Lane footway
63	Sycamore	Proposed Green Lane footway
65	Sycamore	Proposed Green Lane footway
75	Ash	Proposed Green Lane footway

Trees that require above soil surfacing within RPAs

No.	Species	Type of structure
38	Common lime	Proposed ramp up to development parcel
40	Field maple	Proposed ramp up to development parcel
60	Sycamore	Proposed ramp up to development parcel
61	Ash	Proposed ramp up to development parcel
63	Sycamore	Proposed ramp up to development parcel
65	Sycamore	Proposed ramp up to development parcel
67	Sycamore	Proposed ramp up to development parcel
70	Sycamore	Proposed ramp up to development parcel
72	Ash	Proposed ramp up to development parcel
1058	Ash	Proposed ramp up to development parcel

SJA trees ARBORICULTURAL PLANNING CONSULTANTS

Project:	Land South of Green Lane, Chesterton
Client:	Wates
Drawing:	TREE PROTECTION PLAN
Drawing no:	SJA TPP 20010-041a
Based on:	353_SKE_220824_01

Drawn by: FJC	Date of Issue: Aug 2022	Scale: 1: 1000@ A1
Checked by: FPS	Tel:(01737) 813058	sja@sjatrees.co.uk

Tree nos.:	● 60	Category 'U' trees:	● [862]	Canopies of trees to be retained:	
Category 'A' RPA:		Category 'B' RPA:		Category 'C' RPA:	
Trees to be removed:	39	Protective fencing:		Manual excavation:	
Soil build-up:					

For further information refer to the SJAtrees Tree Survey Schedule

Do not scale from this drawing: please check all dimensions on site, and notify us of any discrepancies. SJAtrees (the trading name of Simon Jones Associates Ltd.) cannot be held responsible for inaccuracies in the topographical plan on which this drawing is based.

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This drawing is designed to reflect only the principles of layout and /or design insofar as these relate to the protection of trees to be retained, and should NOT be read as a definitive engineering or construction method statement. Reference should be made to the architect or structural engineer, as appropriate, over any matters of construction detail or specification, or any engineering standards or regulatory requirements relating to proposed structures, hard surfaces or underground services.