Mr. & Mrs. Owen

11 Moor Lane, Bunny

Arboricultural Assessment

February 2024

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1.0 INTRODUCTION

1.1 This report has been prepared by FPCR Environment and Design Limited on behalf of Mr. & Mrs. Owen to present the findings of an Arboricultural Assessment and survey of trees located at 10 Moor Lane, Bunny (hereafter referred to as the site).

Site Description

1.2 The site is a residential property located on Moor Lane, Bunny. The site is accessed via a driveway from Moor Lane between two properties. To the north, south and west of the site are private residential properties, to the east is a field and beyond this is the Bunny C of E Primary School. Located in the centre of site is a single dwelling, with the tree cover on site restricted to/near the boundaries.

Scope of Assessment

1.3 A tree survey and assessment of existing trees was carried out by FPCR Environment and Design on 4th January 2024 in accordance with guidance contained within British Standard 5837:2012 'Trees in Relation to Design, Demolition and Construction - Recommendations' (hereafter referred to as BS5837).

1.4 This report has been produced to accompany a detailed planning application for the demolition of the existing dwelling and construction of a new dwelling on the site.

1.5 The purpose of this report is therefore to firstly, present the results of this assessment of the existing trees' arboricultural value, based on their current condition and quality and to secondly, provide an assessment of impact arising from the proposed development of the site.

2.0 PLANNING POLICY

National Planning Policy Framework December 2023

2.1 National Planning Policy is defined by the National Planning Policy Framework (NPPF). This sets out the Government's most current and up to date planning policies for England and how these should be applied. The current NPPF is dated December 2023.

2.2 Paragraphs 10 and 11 of the NPPF state that there is a presumption in favour of sustainable development and states that for decision making, the LPA should be '*c) approving development proposals that accord with an up-to-date development plan without delay'.*

2.3 In relation to arboriculture, the NPPF states that:

- *186 (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 (footnote 67) and a suitable compensation strategy exists'.*

  and provides specific guidance that:

- *186 (d) 'development whose primary objective is to conserve or enhance biodiversity should be supported; while opportunities to improve biodiversity in and around developments should be integrated as part of their design, especially where this can secure measurable net gains for biodiversity or enhance public access to nature where this is appropriate'.*

2.4 With reference to paragraph 186 (c), examples of what is deemed to be *'wholly exceptional'* are included within Footnote 67 and provides the examples of '*infrastructure projects (including nationally significant infrastructure projects, orders under the Transport and Works Act and hybrid bills), where the public benefit would clearly outweigh the loss or deterioration of habitat'.*

Local Planning Policy

2.5 Local planning decisions regarding all future developments are assessed against a framework to ensure that the district or county in question is developed in a well-informed and coherently systematic manner, this may include decisions to ensure that the right number and types of houses are built and incorporating the correct type of shopping and recreation facilities, whilst protecting the local ecological resources, landscape context and intrinsic heritage value of an area.

2.6 Within the context of the adopted Local Plan October 2019 for Rushcliffe Borough Council the following policy relates to trees and woodland.

POLICY 37 TREES AND WOODLANDS

1. Adverse impacts on mature tree(s) must be avoided, mitigated or, if removal of the tree(s) is justified, it should be replaced. Any replacement must follow the principle of the 'right tree in the right place'.

2. Planning permission will not be granted for development which would adversely affect an area of ancient, semi-natural woodland or an ancient or veteran tree, unless the need for, and public benefits of, the development in that location clearly outweigh the loss.

3. Wherever tree planting would provide the most appropriate net-gains in biodiversity, the planting of additional locally native trees should be included in new developments. To ensure tree planting is resilient to climate change and diseases a wide range of species should be included on each site.

3.0 SURVEY METHODOLOGY

3.1 The survey of trees has been carried out in accordance with the criteria set out in Chapter 4 of BS5837. The survey has been undertaken by a suitably qualified and experienced arboriculturist and has recorded information relating to all those trees within the site and those adjacent to the site which may be of influence to any proposals. Trees were assessed for their arboricultural quality and benefits within the context of the proposed development in a transparent, understandable, and systematic way.

3.2 Trees have been assessed as groups where trees form cohesive arboricultural features either aerodynamically, visually or culturally including biodiversity or habitat potential for example parkland or wood pasture.

3.3 An assessment of individual trees within groups has been made where a clear need to differentiate between them, for example, to highlight significant variation between attributes including physiological or structural condition or where a potential conflict may arise.

BS5837 Categories

3.4 Trees and groups have been divided into one of four categories based on Table 1 of BS5837, *'Cascade chart for tree quality assessment'*. For a tree to qualify under any given category it should fall within the scope of that category's definition (see below).

3.5 Category U trees are those which would be lost in the short term for reasons connected with their physiology or structural condition. They are, for this reason not considered in the planning process on arboricultural grounds.

3.6 Categories A, B and C are applied to trees that should be of material consideration in the development process. Each category also having one of three further sub-categories (i, ii, iii) which are intended to reflect arboricultural, landscape and cultural or conservation values accordingly.

3.7 **Category (U) – (Red):** Trees which are unsuitable for retention and are in such a condition that they cannot realistically be retained as living trees in the context of the current land use for longer than 10 years. Trees within this category are:

- Trees that have a serious irremediable structural defect such that their early loss is expected due to collapse and includes trees that will become unviable after removal of other category U trees.
- Trees that are dead or are showing signs of significant, immediate or irreversible overall decline.
- Trees that are infected with pathogens of significance to the health and/ or safety of other nearby trees or are very low quality trees suppressing adjacent trees of better quality.
- Certain category U trees can have existing or potential conservation value which may make it desirable to preserve.

3.8 **Category (A) – (Green):** Trees that are considered for retention and are of high quality with an estimated remaining life expectancy of at least 40 years with potential to make a lasting contribution. Such trees may comprise:

- Sub category (i) trees that are particularly good examples of their species, especially if rare or unusual, or are essential components of groups such as formal or semi-formal arboricultural features for example the dominant and/or principal trees within an avenue.
- Sub category (ii) trees, groups or woodlands of particular visual importance as arboricultural and / or landscape features.
- Sub category (iii) trees, groups or woodlands of significant conservation, historical, commemorative or other value for example veteran or wood pasture.

3.9 **Category (B) – (Blue):** Trees that are considered for retention and are of moderate quality with an estimated remaining life expectancy of at least 20 years with potential to make a significant contribution. Such trees may comprise:

- Sub category (i) trees that might be included in category A but are downgraded because of impaired condition for example the presence of significant though remediable defects, including unsympathetic past management and storm damage.
- Sub category (ii) trees present in numbers, usually growing as groups or woodlands, such that they attract a higher collective rating than they might as individuals or trees occurring as collectives but situated so as to make little visual contribution to the wider locality.
- Sub category (iii) trees with material conservation or other cultural value.

3.10 **Category (C) – (Grey):** Trees that are considered for retention and are of low quality with an estimated remaining life expectancy of at least 10 years or young trees with a stem diameter below 150mm. Such trees may comprise:

- Sub category (i) unremarkable trees of very limited merit or such impaired condition that they do not qualify in higher categories.
- Sub category (ii) trees present in groups or woodlands, but without this conferring on them significantly greater collective landscape value or trees offering low or only temporary / transient screening benefits.
- Sub category (iii) trees with no material conservation or other cultural value.

Ancient and Veteran Trees

3.11 Various published methodologies are currently available for the identification of Ancient and Veteran trees which, due to the complexity and subjectivity of the process of defining and assessing these trees, often have conflicting definitions.

3.12 This assessment and the criterion for defining a veteran tree is based upon the definition within BS:5837.

"Tree that, by recognized criteria, shows features of biological, cultural or aesthetic value that are characteristic of, but not exclusive to, individuals surviving beyond the typical age range for the species concerned".

NOTE These characteristics might typically include a large girth, signs of crown retrenchment and hollowing of the stem

3.13 Stem girth is the most reliable guide when determining the age of trees and in normal growing conditions, ancient and veteran trees are those which have a large girth by comparison with other trees of the same species. To inform the assessment of chronological age reference has been made to the chart provided within Lonsdale (2013) (shown below in Figure 1).

3.14 BS:5837 does not provide a definition for ancient trees and therefore the assessment and the criterion being used for identifying ancient tree is based upon government guidance on, *Ancient woodland, ancient trees and veteran trees: advice for making planning decisions*[1] which states.

"All ancient trees are veteran trees, but not all veteran trees are ancient. The age at which a tree becomes ancient, or veteran will vary by species because each species ages at a different rate."

1 Ancient woodland, ancient trees and veteran trees: advice for making planning decisions - GOV.UK (www.gov.uk)

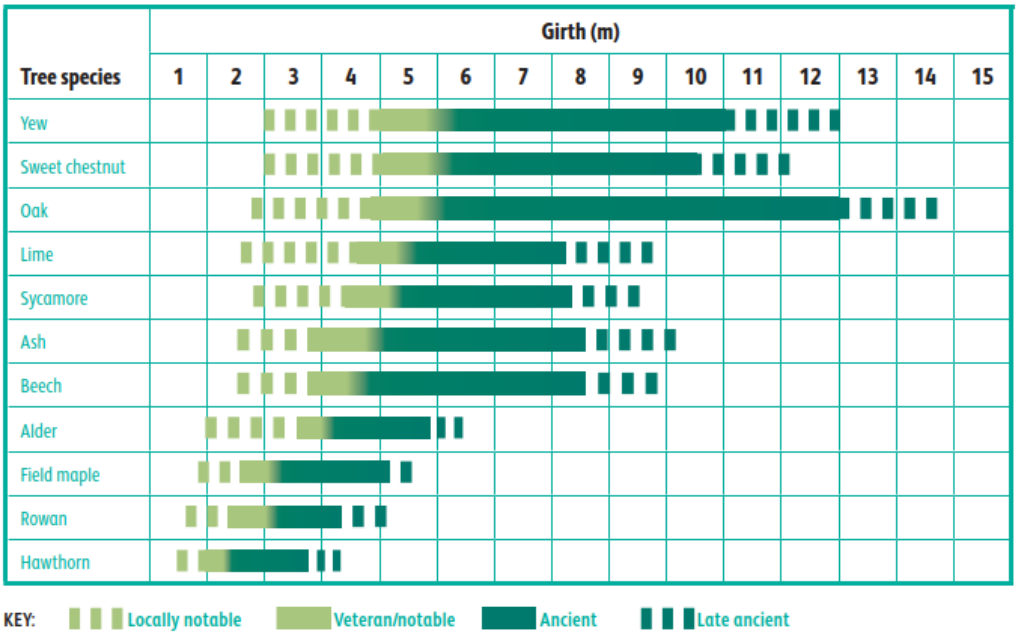


Figure 1: The chart of girth in relation to age and development classification of trees, as shown in Lonsdale (2013)[2].

3.15 Ancient and veteran trees are also material considerations within the planning process and their importance is specifically recognised within the National Planning Policy Framework (NPPF) 2023, which includes its own definition of ancient and veteran trees:

'A tree which, because of its age, size, and condition, is of exceptional biodiversity, cultural or heritage value. All ancient trees are veteran trees. Not all veteran trees are old enough to be ancient but are old relative to other trees of the same species. Very few trees of any species reach the ancient life-stage.'[3]

Considerations and Limitations of the Tree Survey

3.16 The survey was completed from ground level only and from within the boundary of the site. Aerial tree inspections or an assessment of the internal condition of the stem/s or branches were not undertaken at this stage as this level of survey is beyond the scope of the initial assessment.

3.17 The statements made in this report regarding the assessed trees applies to the date of survey and cannot be assumed to remain unchanged. It will be necessary to review all comments and observations made within this report, in accordance with sound arboricultural practice, within two years of the date of survey (unless explicitly stated elsewhere within this report). Further review may also be necessary where site conditions change or works to trees are carried out which have not been specified in detail within this report.

3.18 It may be necessary during detailed design to undertake further assessment and accurate positioning of woody species within tree groups, to assist structural calculations for foundation design of structures in accordance with NHBC Chapter 4.2 Building near Trees.

[2] Lonsdale, D. (Ed.). 2013). Ancient and other veteran trees: further guidance on management. London: The Tree Council.
[3] Ministry of Housing, Communities and Local Government. (2019). *National Planning Policy Framework.* London: Ministry of Housing, Communities and Local Government.

4.0 RESULTS

4.1 A total of 12 individual trees and two groups of trees were surveyed as part of the Arboricultural Assessment. Trees were surveyed as groups as per the survey methodology.

4.2 Appendix A presents details of all individual trees and groups recorded during the assessment including heights, diameters at 1.5m from ground level, crown spread (given as a radial measurement from the stem), age class, comments as to the overall condition at the time of inspection, BS5837 category of quality and suitability for retention and the root protection area (RPA), calculated in accordance with Annex C, D and Section 4.6 of BS5837:2012.

4.3 General observations particularly of structural and physiological condition for example the presence of any decay and physical defect and preliminary management recommendations have also been recorded where appropriate.

4.4 The individual positions of trees and groups have been shown on the Tree Survey Plan. The positions of trees are based on a topographical / land survey, as far as possible, supplied by the client. Where topographical information has not identified the position of trees these have been plotted using a global positioning system and aerial photography to provide approximate locations. The crown spread, root protection area and shade pattern (where appropriate) are also indicated on this plan.

Results Summary

4.5 Tree cover on the site was restricted to/near the boundaries and included a mixture of fruit trees and ornamental specimens in the north of the site and more mature native tree cover along the eastern boundary. The tree cover was of moderate or low quality from an arboricultural perspective, with no high-quality tree cover being recorded.

4.6 Table 1 below summarises the trees assessed and several of the trees have been discussed in more detail following the table, owing to their physical condition or arboricultural significance.

Table 1: Summary of Trees by Retention Category

	Individual Trees	Total	Groups of Trees	Total
Category U - Unsuitable	T17	1		0
Category A (High Quality / Value)		0		0
Category B (Moderate Quality / Value	T9, T10, T11, T16, T18, T19	6	G2	1
Category C (Low Quality / Value)	T1, T2, T3, T4, T5. T6, T7, T8, T12, T13, T14, T15	12	G1	1

4.7 A single tree (T1), a semi mature false acacia *Robinia pseudoacacia* was recorded just beyond a boundary fence forming the site's western boundary and within the rear garden of an adjoining property. Situated within influencing distance of the site the tree was assessed and recorded as being of low arboricultural value (Category C) by virtue of its immature proportions.

4.8 Six fruit trees (T2-T7), three damson *Prunus insititia,* an apple *Malus domestica* and two pear *Pyrus communis,* were recorded on/near to the site's northern boundary. Due to a lack of recent management the trees had developed outgrown forms with tall stems and crossing and rubbing branches. Storm damage was also evident with small broken branches noted on several specimens and a single pear tree (T7) having recently suffered significant stem failure. The six trees were all recorded as being of low quality but could be improved through management.

4.9 Three early mature false acacias (T9, T10 and T11) had been planted in the northeast corner of the site. The three trees had developed with tall upright forms, due to the close spacing between them and were recorded as being of moderate quality (Category B), displaying no defects beyond small broken branches and a bark wound on the stem T10.

4.10 Four mature trees (T16-T19), a single ash *Fraxinus excelsior* and three sycamore *Acer pseudoplatanus* were recorded on the site's eastern boundary along the edge of an adjoining field. T16, T18 and T19 were considered of moderate quality, displaying no obvious defects and having been subject to only minor pruning to raise the crowns above the existing garden. T17 a mature sycamore had been reduced to 1.5m in height and the stem displayed extensive hollowing. Regrowth shoots were noted but due to the extent of decay these should not be allowed to establish and T17 was recorded as unsuitable for retention (Category U).

4.11 The site's southern boundary abutted the rear garden of an adjoining property which contained trees recorded as G2. Comprising a mixture of native and ornamental species G2 provided moderate screening value and was recorded as Category B.

Ancient and Veteran Trees

4.12 None of the assessed trees were considered as ancient or veteran trees in accordance with our veteran survey methodology.

Statutory Considerations

4.13 Local authorities have a Duty under the Town and Country Planning Act to create Tree Preservation Orders (TPO) to protect and preserve specific trees and woodlands that bring significant amenity benefit to a particular site or location. Under the Planning (Listed Buildings and Conservation Areas) Act 1990 local authorities also have the power to designate Conservation Areas, to protect places of special interest where it is considered especially important to preserve the character and appearance of the area.

4.14 No direct consultation with the Local Planning Authority has taken place, however, it is understood having used the online search facility on the website for the Local Planning Authority, Rushcliffe Borough Council that there are no Tree Preservation Orders (TPO) on the site, but the site is within the Bunny Conservation Area, and therefore statutory constraints apply to the development in respect of trees.

4.15 Within a Conservation Area extra planning controls are in place to help the Council manage change in conservation areas so that the special interest can be preserved. You must give the Council 6 weeks' notice of any proposed felling or works to trees with a diameter of over 75mm at 1500mm height, or with a diameter of over 100mm if within a group of trees that needs thinning. This gives the Council 6 weeks to consider whether to serve a Tree Preservation Order (TPO).

4.16 Should the proposed works form part of a wider planning application there would be no need to ask for separate Conservation Area consent for works to trees. But prior to any tree surgery and / or the removal of trees not detailed within this report it will be necessary to apply to the relevant local planning authority to gain consent for the works.

4.17 Information provided on Tree Preservation Orders and Conservation Areas is accurate to the date of this assessment and cannot be assumed to remain unchanged. The last check was carried out on 9th January 2024.

5.0 ARBORICULTURAL IMPACT ASSESSMENT

5.1 The following paragraphs present a summary of the tree survey and discussion of trees and groups recorded in the context of any proposed development in the form of an Arboricultural Impact Assessment in accordance with section 5.4 of BS5837. Any final tree retentions will need to be reconciled with the advice contained within this report.

5.2 The AIA has been based upon the Proposed Site Plan and seeks to outline the relationship between the proposals and the existing trees and hedgerows. The drawing shows the proposals for the demolition of the existing dwelling and construction of a new dwelling on the site.

5.3 An overlay of the layout has been incorporated in the Tree Retention Plan to assist in identifying the relationship and any potential conflicts between the proposals and the existing trees. The plan also identifies which trees would be required to be removed or retained as part of the proposed development.

5.4 The proposed development has through careful design, allowed for the retention of all existing tree cover.

5.5 While the proposals have been designed around the retention of all tree cover, due to the constrained nature of the site and the desire to create more usable outside space, the placing of the proposed new dwelling will impact a small percentage of the calculated RPA of T4, a mature apple tree and T5, a mature damson.

5.6 The RPA of T4 has, on the Tree Survey and Tree Retention Plan, been modified to reflect the existing site conditions, being modified around the existing foundations of the property on site. The affected RPA is also partially covered by hardstanding in the form of a concrete path around the existing dwelling which is likely have influenced root development, not allowing water and oxygen to penetrate the soil. There are also underground services within the area which again are likely to have influenced root development within the area where the new dwelling is proposed.

5.7 Development of the site and demolition of the current dwelling, which is considered not fit for purpose, will require the existing foundations and footpath around the dwelling be removed and would require ground works in the RPA of T4.

5.8 In total 1.86m² of the modified RPA of T4 will be affected by the new dwelling which roughly equates to 3% of the total RPA, with the remaining percentage of the RPA being unaffected and the area retained as outdoor amenity space. While the area of the RPA affected by the development could potentially contain roots, it is highly unlikely that the loss of this small percentage of the total RPA would have any adverse impact on the health of T4. The removal of hardstanding around the existing dwelling to create unsurfaced outdoor amenity space will increase the area of unsurfaced ground within the RPA of T4 and could represent a net improvement to the rooting area of this tree.

5.9 It is worth noting that T4 was structurally in a poor condition, with multiple cavities noted on its main stem, one of which was of large diameter (100mm) and extended approximately 150mm into the stem. A detailed evaluation of the stem was not undertaken, as this would be beyond the scope of this assessment, but from a visual assessment only, the tree appeared to have sufficient remaining wood and the stem was not considered structurally compromised. It is however recommended that the tree be subject to a reduction in both height and spread to reduce the loading force on the stem as a precaution.

5.10 1.57m² of the RPA of T5, a mature damson is also shown to be affected by the proposed dwelling, this roughly equates to 4% of the total RPA. While the area of the RPA affected by the development could potentially contain roots, it is highly unlikely that the loss of this small percentage of the total RPA would have any adverse impact on the health of T5. With the remaining percentage of the RPA being unaffected and the retained within outdoor amenity space.

5.11 T5 was also structurally in a poor condition, developing three stems from ground level but with the smallest stem having been topped at 4m. The two remaining stems had both suffered storm damage and had lost significant branches resulting in tear out wounds. While these defects are remediable it would require T5 be subject to a significant reduction, reducing both stems to below the point of failure. This reduction in crown area would likely compensate for any potential loss of rooting area and the tree should, provided it has sufficient energy reserves, achieve a new balance between root and crown area.

5.12 All retained trees should be subjected to sound arboricultural management as recommended within section 8.8.3 of BS5837 *Post Development Management of Existing Trees*. Upon completion of the development is it advised that a survey of the trees be carried out by an experienced arboriculturist or arborist to identify any safety risks and to agree remedial works as required.

5.13 As the site is within a Conservation Areas the Council must be given 6 weeks' notice of any proposed works to retained trees, with a stem diameter of over 75mm at 1500mm height, or with a diameter of over 100mm if within a group of trees that needs thinning. This gives the Council 6 weeks to consider whether to serve a Tree Preservation Order (TPO).

5.14 All tree works proposed should comply with British Standard 3998:2010 and should be carried out by skilled tree surgeons. It would be recommended that quotations for such work be obtained from Arboricultural Association Approved Contractors as this is the recognised authority for certification of tree work contractors.

Discussion

5.15 In conclusion for arboriculture, the proposals are considered to meet the aims and objectives of local and national policy through careful consideration of the design and retention of all existing tree cover.

6.0 TREE PROTECTION MEASURES

6.1 The retained trees should be adequately protected during both the demolition and construction phases through the erection of the requisite tree protection measures. These protection measures should follow the guidance in BS5837 and be applied where necessary for the purpose of protecting trees within the site whilst allowing sufficient access for the implementation of the proposed layout. These have been broadly summarised below.

General Information and Recommendations

6.2 All trees retained on site should be protected by suitable barriers or ground protection measures around the calculated RPA, crown spread of the tree or other defined constraints of this assessment as detailed by section 6 and 7 of BS5837.

6.3 Barriers should be erected prior to commencement of any demolition work and once installed, the area protected by fencing or other barriers will be regarded as a construction exclusion zone.

6.4 Construction access may take place within the root protection area if suitable ground protection measures are in place. This may comprise single scaffold boards over a compressible layer laid onto a geo-textile membrane for pedestrian movements. Vehicular movements over the root protection area will require the calculation of expected loading and the use of proprietary protection systems.

Tree Protection Barriers

6.5 Tree protection fencing should be fit for the purpose of excluding any type of construction activity and suitable for the degree and proximity of works to retained trees. Barriers must be maintained to ensure that they remain rigid and complete for the duration of construction activities on site.

6.6 In most situations, fencing should comprise typical construction fencing panels attached to scaffold poles driven vertically into the ground. As illustrated in Appendix B.

6.7 Where site circumstances and the risk to retained trees do not necessitate the default level of protection an alternative specification is also illustrated in Appendix B, which may be appropriate to the level / nature of anticipated construction activity.

Protection outside the exclusion zone

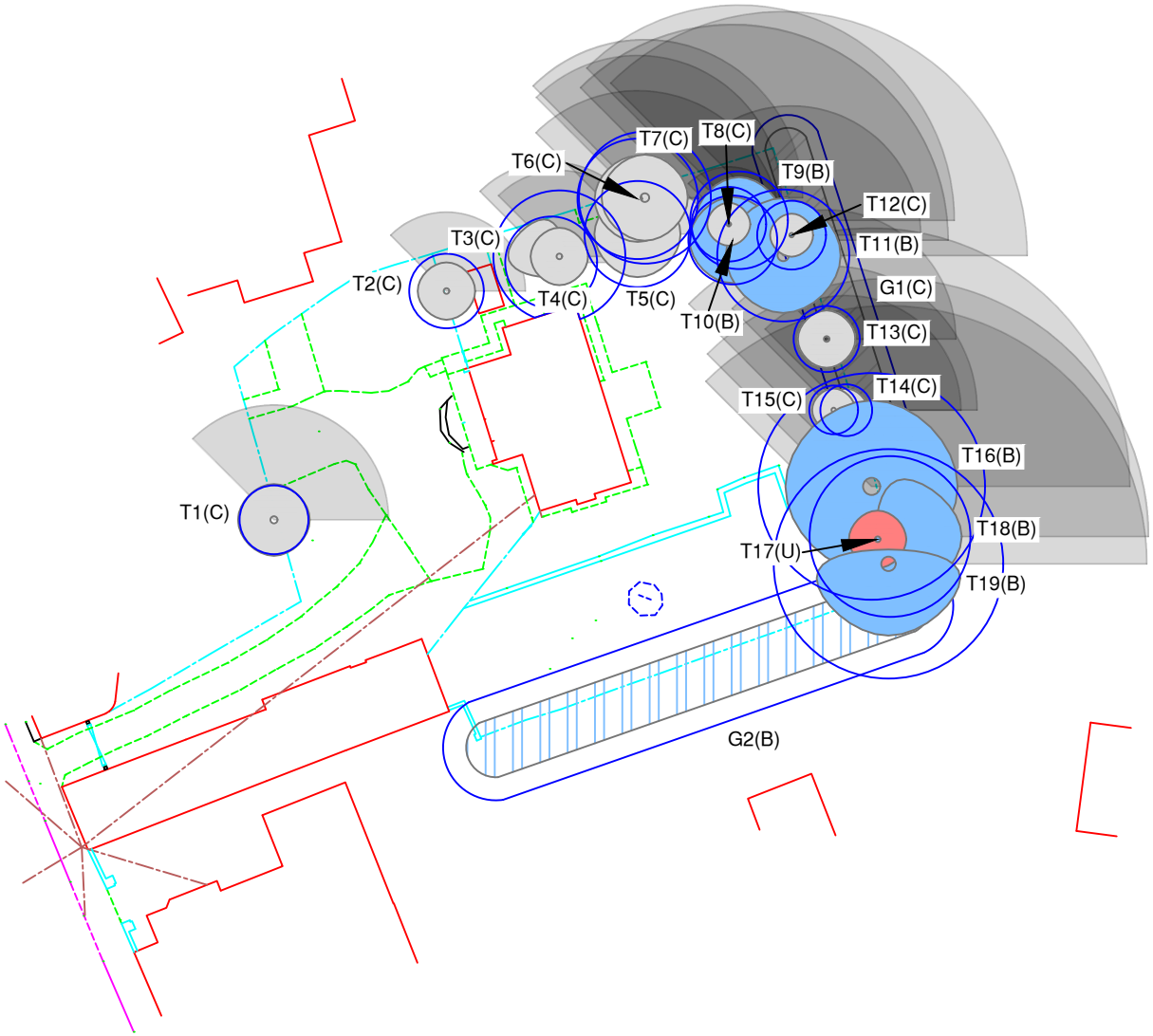
6.8 Once the areas around trees have been protected by the barriers, any works on the remaining site area may be commenced providing activities do not impinge on protected areas.

6.9 All weather notices should be attached to the protective fencing to indicate that construction activities are not permitted within the fenced area. The area within the protective barriers will then remain a construction exclusion zone throughout the duration of the construction phase of the proposed development.

6.10 Wide or tall loads etc should not come into contact with retained trees. Banksman should supervise transit of vehicles where they are near retained trees.

6.11 Oil, bitumen, cement or other material that is potentially injurious to trees should not be stacked or discharged within 10m of a tree stem. No concrete should be mixed within 10m of a tree. Allowance should be made for the slope of ground to prevent materials running towards the tree.

6.12 Notice boards, telephone cables or other services should not be attached to any part of a retained tree.



KEY

- Category U - Trees / Groups Unsuitable for Retention (BS 5837:2012)
- Category B - Trees / Groups of Moderate Quality (BS 5837:2012)
- Category C - Trees / Groups of Low Quality (BS 5837:2012)
- Root Protection Area (The RPA has been altered where appropriate to reflect underground constraints)
- T1 (A) G1 (A) — Individual / Group Number and BS5837:2012 Category
- Indicative Shade Pattern (in accordance with BS5837:2012 where appropriate)

NOTES

All dimensions to be verified on site. Do not scale this drawing, use figured dimensions only. All discrepancies to be clarified with project Arboriculturalist. Drawing to be read in conjunction with Arboricultural Assessment and Appendix A - Tree Schedule.

Drawing has been produced in colour and is based on digital information in .dwg format, aerial images and/or GPS location where appropriate. A monochrome copy should not be relied upon. The exact position of individual trees or species included as part of a tree group, woodland or hedgerow should be checked and verified on site prior to any decisions for foundation design, tree operations or construction activity being undertaken. Further survey work would be required for calculating foundation depths.

Trees are living organisms that change over time, the condition of all trees illustrated herein, are to be checked by the project Arboriculturalist should works commence 12 months after the date of this survey.

SOME TREES MAY BE SUBJECT TO STATUTORY CONSTRAINTS. IT IS THEREFORE ADVISED THAT NO WORKS SHOULD BE UNDERTAKEN TO ANY TREES ILLUSTRATED HEREIN WITHOUT FIRST OBTAINING THE RELEVANT AUTHORISATION TO DO SO UNLESS AGREED AS PER THE APPROVED PLANS THROUGH PLANNING CONSENT.

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landscape design
urban design
ecology
architecture
arboriculture

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Bunny

drawing title
TREE SURVEY PLAN

scale	drawn/checked	date
1:500 @ A4	EC	January 2024

drawing number
12229-T-01

rev
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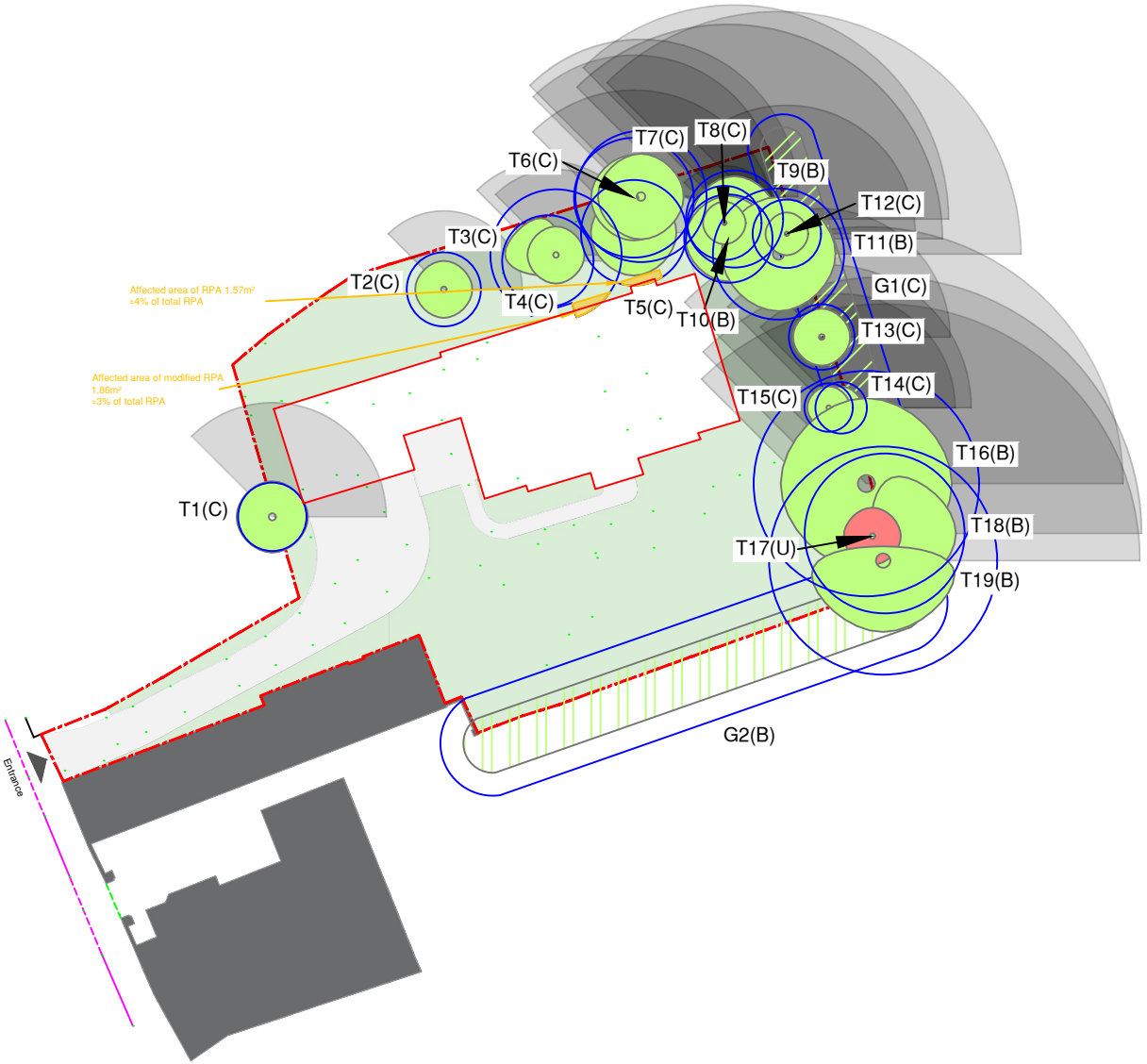
CAD file: L:\12200\12229\ARB\AA\Plans\Tree Survey Plan.dwg



KEY

- Tree/Group to be Retained
- Category U - Unsuitable for retention on arboricultural grounds
- Root Protection Area (Shown for retained trees only)
- T1 (A) G1 (A) — Individual / Group Number and BS 5837:2012 Category
- Indicative Shade Pattern (in accordance with BS5837:2012 where appropriate)

Scale 1:500 @ A4

0 10 20m

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SOME TREES MAY BE SUBJECT TO STATUTORY CONSTRAINTS. IT IS THEREFORE ADVISED THAT NO WORKS SHOULD BE UNDERTAKEN TO ANY TREES ILLUSTRATED HEREIN WITHOUT FIRST OBTAINING THE RELEVANT AUTHORISATION TO DO SO UNLESS AGREED AS PER THE APPROVED PLANS THROUGH PLANNING CONSENT.

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-	04.01.24	Draft Issue	EC
A	04.01.24	First Issue	EC
B	30.01.24	Revision	EC
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masterplanning
environmental assessment
landscape design
urban design
ecology
architecture
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project
10 Moor Lane
Bunny

drawing title
TREE RETENTION PLAN

scale	drawn/checked	date
1:500 @ A4	EC	February 2024

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12229-T-02

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Appendix A - Tree Schedule

Measurements	Age Classes	Quality Assessment of BS Category	ULE (relates to BS Category)
Height - Measured using a digital laser clinometer (m)	**YNG**: Establishing, typically with good vigour and fast growth rates and strong apical dominance; c. less than 1/3 life expectancy	**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.	<10 years
Stem Dia. - Diameter measured (mm) in accordance with Annex C of the BS5837	**SM:** Semi-mature trees less than 1/3 life expectancy	**Category A -** Trees of high quality with an estimated remaining life expectancy of at least 40 years.	40+ years
Crown Radius - Measured using a digital laser clinometer radially from the main stem (m)	**EM:** Established, typically vigorous and increasing in apical height and lateral spread; 1/3 - 2/3 life expectancy. Offers landscape significance	**Category B -** Trees of moderate quality with an estimated remaining life expectancy of at least 20 years.	20-40 years
Abbreviations est - Estimated stem diameter avg - Average stem diameter for multiple stems upto - Maximum stem diameter of a group	**M:** Fully established over 2/3 life expectancy, generally good vigour and achieving full height potential with crown still spreading	**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.	10-20 years
	OM: Fully mature, at the extremes of expected life expectancy, vigour decreasing, declining or moribund	Sub-categories: (i) - Mainly arboricultural value (ii) - Mainly landscape value (iii) - Mainly cultural or conservation value	
	V: biological, cultural or aesthetic value comprising niche saproxylic habitat. Individuals of large proportions (stem girth) in comparison to trees of the same species/surviving beyond the typical age range for their species.	**The BS category particular consideration has been given to the following:** • The presence of any structural defects in each tree/group and its future life expectancy • The size and form of each tree/group and its suitability within the context of a proposed development • The location of each tree relative to existing site features e.g. its screening value or landscape features • Age class and life expectancy	

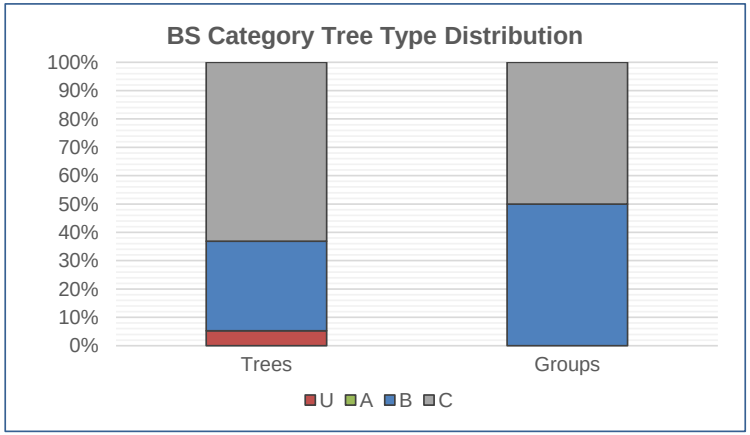
Structural Condition	Physiological Condition	Root Protection Area (RPA)
Good - No significant structural defects	**Good -** No significant health problems	• The RPA Radius column provides the extent of an equivalent circle from the centre of the stem (m). • The RPA is calculated using the formulae described in paragraph 4.6.1 of British Standard 5837: 2012 and is indicative of the rooting area required for a tree to be successfully retained. Tree roots extend beyond the calculated RPA in many cases and where possible a greater distance should be protected. • Where veteran trees have been identified the RPA has been calculated in accordance with Natural England guidance i.e. 15x the stem diameter, uncapped.
Fair - Structural defects that can be remediated	**Fair -** Symptoms of ill-health that can be remediated	
Poor - Significant defects beyond remediation, present a risk of failure in the foreseeable future	**Poor -** Significant ill-health. Unlikely the tree will recover in the long term	
Dead - Dead tree with structural integrity of tree severely compromised	**Advanced Decline / Dead -** Advanced state of decline and unlikely to recover or Dead	

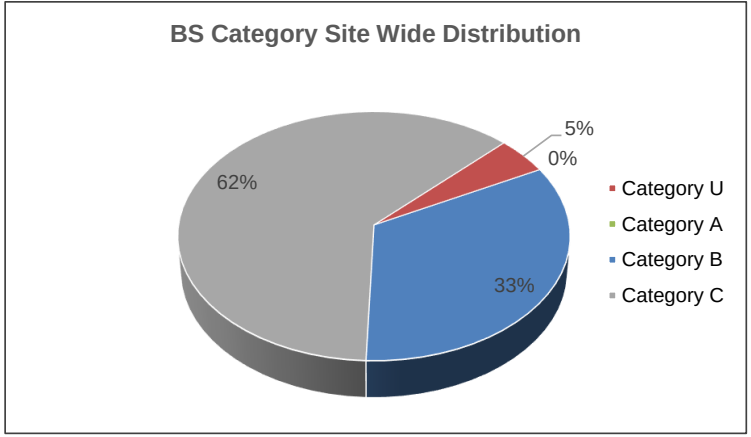
Appendix Summary

	Individual Trees	Totals	Tree Groups and Hedgerows	Totals
Category U	T17	1		0
Category A		0		0
Category B	T9, T10, T11, T16, T18, T19	6	G2	1
Category C	T1, T2, T3, T4, T5, T6, T7, T8, T12, T13, T14, T15	12	G1	1
	Total	19	**Total**	2

BS Category Tree Type Distribution displays the proportion of trees assessed in each type to enable a better understanding of the category distribution.

BS Category Site Wide Distribution shows the proportion of trees assessed in each category across the whole site which allows an interpretation of the site's overall quality.



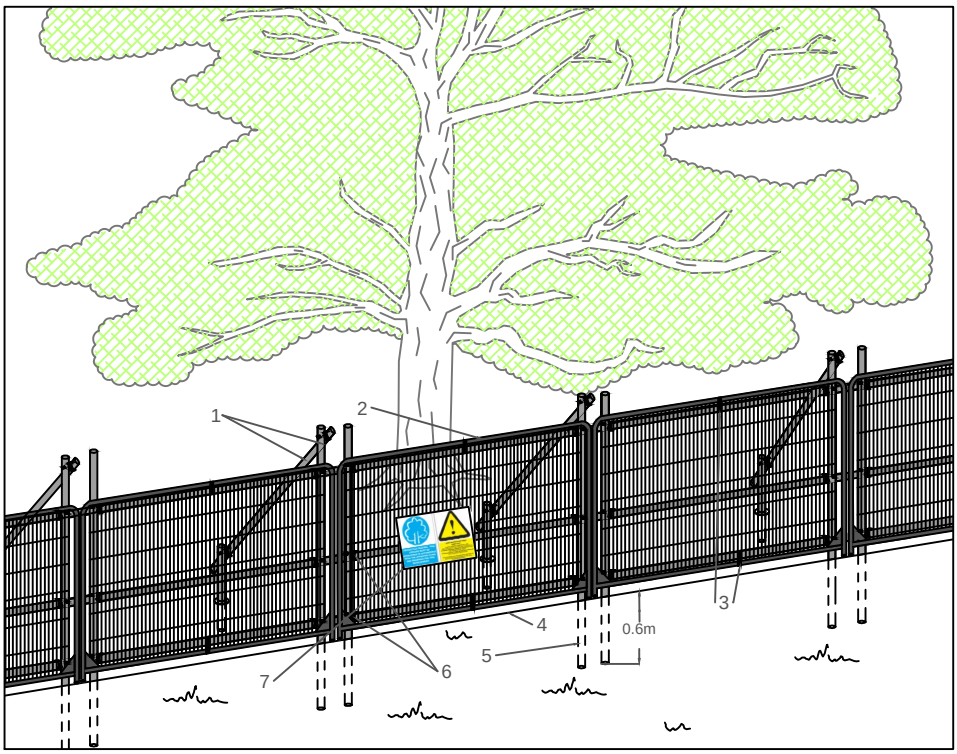


Tree No	Species	Height	Stem Dia.	Crown Radius	Age Class	Overall Condition	Structural Condition	RPA	RPA Radius	BS5837 Cat
INDIVIDUAL TREES										
T1	False Acacia Robinia pseudoacacia	8	200	2.5	SM	F	Situated 0.5m beyond boundary fence crossing branches past pruning to raise crown	18	2.4	C (i)
T2	Damson Prunus insititia	5.5	220	2	M	P	Situated within strip of land between a fence and shed past pruning to raise crown broken branches noted within crown companion elder at base outgrown form could be improved through management	22	2.6	C (i)
T3	Damson Prunus insititia	7	190 155 100	N - 3 S - 1 E - 1 W - 3	M	P	Established within 0.5m of mature apple detrimental to adjacent tree uneven crown due to close spacing weighted to north west included union noted between stems at base crossing branches noted within crown consider removal to benefit neighbouring apple tree	32	3.2	C (i)
T4	Apple Malus domestica	6	380	2	M	F	Multiple bark wounds a branch socket cavities noted on main stem with a single large cavity at 0.5m which extends circa 150mm past pruning to reduce crown to south single large diameter dead branch to North at 2.5m outgrown form could be improved through management	65	4.6	C (i)
T5	Damson Prunus insititia	10	205 190 130	3	M	P	Three stems develop from base smallest stem has been topped at 4m with no regrowth evident storm damage with large tear out wounds noted on two larger stems with exposed heartwood etoliated form	43	3.7	C (i)
T6	Pear Pyrus communis	10	265 165 155	3	EM	P	Established within 0.5m of mature pear tree three stems develop from base smallest stem to east has been damaged by recent branch failure from neighbouring tree largest stem has multiple sap runs the cause of which is unclear possible dieback of upper crown with small diameter dead branches poor form would benefit from management	55	4.2	C (i)

Tree No	Species	Height	Stem Dia.	Crown Radius	Age Class	Overall Condition	Structural Condition	RPA	RPA Radius	BS5837 Cat
T7	Pear Pyrus communis	11	295 240	3	M	P	Twin stems develop at 1m with included bark union noted between stems stem cross and rubbing at 2m complete failure of smallest stem at 5m with large tear out no remaining branches largest stem appears to have been previously topped at 4m with several upright stems developing from this point poor form could be improved through management	65	4.6	C (i)
T8	Hawthorn Crataegus monogyna	4	6x 90	1.5	EM	P	Established within 0.5m of Robinia possible sucker from root stock multi stemmed from 1m past pruning to reduce crown limited arboricultural value	22	2.6	C (i)
T9	False Acacia Robinia pseudoacacia	15	285	3	EM	G	Likely planted specimen tall upright form due to close spacing between trees no obvious defects	37	3.4	B (i)
T10	False Acacia Robinia pseudoacacia	15	260	3	EM	F	Likely planted specimen tall upright form due to close spacing between trees bark wound on main stem from 0.5m to 1m with exposed heartwood good wound response small diameter torn out branch at 3m	31	3.1	B (i)
T11	False Acacia Robinia pseudoacacia	17	380	4	M	G	Likely planted specimen tall upright form due to close spacing between trees no obvious defects	65	4.6	B (i)
T12	Lawson Cypress Chamaecyparis lawsoniana	9	200	1.5	EM	F	Likely self seeded from neighbouring group suppressed by larger neighbouring tree limited arboricultural value	18	2.4	C (i)
T13	Damson Prunus insititia	9	195	2	EM	F	Tall upright form past pruning to raise crown storm damage noted with broken branches and branch stubs poor form could be improved through management	17	2.3	C (i)

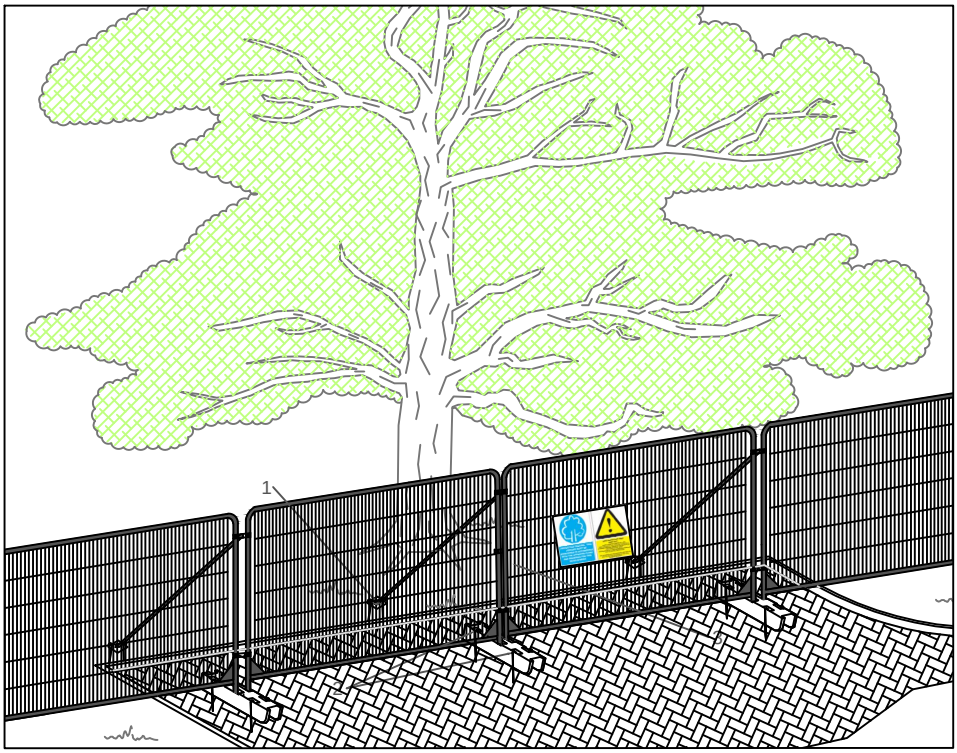
Tree No	Species	Height	Stem Dia.	Crown Radius	Age Class	Overall Condition	Structural Condition	RPA	RPA Radius	BS5837 Cat
T14	Damson Prunus insititia	8	150	1.5	EM	F	Tall upright form suppressed by neighbouring tree past pruning to raise crown poor form could be improved through management	10	1.8	C (i)
T15	Ash Fraxinus excelsior	10	145	1.5	EM	F	Likely self seeded from neighbouring tree limited arboricultural value	10	1.7	C (i)
T16	Ash Fraxinus excelsior	18	660	6	M	G	Situated close to site boundary on a slightly raised area of ground past pruning to raise crown with small diameter pruning wounds some occluded exposed roots at base with minor damage	197	7.9	B (i)
T17	Sycamore Acer pseudoplatanus	4	540	2	M	P	Hollowing stem reduced to 1.5m in height regrowth shoots have developed should not be allowed to re-establish	N/A	N/A	U
T18	Sycamore Acer pseudoplatanus	18	470	N - 4 S - 4 E - 5 W - 1	M	G	Situated beyond site boundary within 0.5m of T17 uneven crown due to close spacing between trees no obvious defects noted	100	5.6	B (i)
T19	Sycamore Acer pseudoplatanus	18	510 370 225	N - 1 S - 5 E - 5 W - 5	M	G	Situated on site boundary three stems develop from 0.5m uneven crown due to close spacing between trees past pruning to raise crown small diameter dead branches noted in crown	203	8.0	B (i)

Group No	Species	Height	Stem Dia.	Crown Radius	Age Class	Overall Condition	Structural Condition	RPA	RPA Radius	BS5837 Cat
GROUPS OF TREES										
G1	Elder Sambucus nigra Damson Prunus insititia Privet Ligustrum ovalifolium Lawson Cypress Chamaecyparis lawsoniana	10	upto 200	1.5	EM	P	Linear group situated beyond site boundary unmaintained with undergrowth throughout limited arboricultural value	18	2.4	C (ii)
G2	Ash Fraxinus excelsior Sycamore Acer pseudoplatanus Holly Ilex aquifolium Weeping Willow Salix x sepulcralis 'Chrycosoma' Norway Spruce Picea abies	13	avg 300	2	EM / M	G	Situated beyond site boundary within neighbouring property assessed from within site boundary moderate screening and arboricultural value	41	3.6	B (ii)



Standard specification for protective barrier

1. Standard scaffold poles
2. Heavy gauge 2m tall galvanized tube and welded mesh infill panels
3. Panels secured to scaffold frame with wire ties
4. Ground level
5. Uprights driven into the ground until secure (min depth of 0.6m)
6. Standard scaffold clamps
7. Construction Exclusion Zone signs



Above ground stabilising systems

1. Stabiliser strut with base plate secured with ground pins
2. Feet blocks secured with ground pins
3. Construction Exclusion Zone signs

masterplanning
environmental assessment
landscape design
urban design
ecology
architecture
arboriculture

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NOTES

drawing title

APPENDIX B
PROTECTIVE FENCING SPECIFICATIONS

CAD file: S:\Arb resources\Basic Templates\Tree Protection\Appendix B - Protective Fencing A4.dwg