



David Wilson Homes (East Midlands)

Barlestone Road, Newbold Verdon

Arboricultural Assessment

October 2024

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CONTENTS

1.0	INTRODUCTION	2
2.0	PLANNING POLICY	3
3.0	SURVEY METHODOLOGY	4
4.0	RESULTS.....	8
5.0	ARBORICULTURAL IMPACT ASSESSMENT	11
6.0	NEW TREE AND HEDGEROW PLANTING.....	13
7.0	TREE PROTECTION MEASURES	14
8.0	TREE MANAGEMENT.....	15

TABLES

Table 1: Summary of Trees by Retention Category

Table 2: Summary of Impact on Tree Stock

FIGURES

Figure 1: The chart of girth in relation to age and development classification of trees

PLANS

Tree Survey Plan (11314-T-01)

Tree Retention Plan (11314-T-02)

Tree Retention Plan – Access (11314-T-03 & 11314-T-04)

APPENDICES

Appendix A: Tree Schedule

Appendix B: Protective Fencing Specifications

1.0 INTRODUCTION

- 1.1 This report has been prepared by FPCR Environment and Design Limited on behalf of David Wilson Homes (East Midlands) to present the findings of an Arboricultural Assessment and survey of trees located at Barlestone Road, Newbold Verdon (hereafter referred to as the site), OS Grid Ref SK 446 044.

Site Description

- 1.2 The site is located to the north of the Leicestershire village of Newbold Verdon and comprised of a number of agricultural field parcels and equestrian paddocks. For the most part, tree cover was native in origin and found around the peripheries of the field boundaries that made up the site. Running along the southern boundary of the site was the B582 Barlestone Road and beyond that was the residential edge of Newbold Verdon. To the north, east and west of the site were further agricultural field parcels.

Scope of Assessment

- 1.3 A tree survey and assessment of existing trees was carried out by FPCR Environment and Design on Wednesday 2nd November 2022 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 planning application for an outline planning application (all matters reserved except vehicular access) for the erection of up to 240 residential dwellings (Use Class C3), retention of the existing accesses off Barlestone Road and the creation of new accesses off Barlestone Road, land safeguarded for a cemetery and a health centre (Use Classes E(e)), public open space and associated infrastructure.
- 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:
- 136 *'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 (footnote 53), 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'. (footnote 53: unless, in specific cases, there are clear, justifiable and compelling reasons why this would be inappropriate)*
 - 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'*.

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, hedgerows or woodland where it has been determined appropriate.
- The term group has been applied where trees form cohesive arboricultural features either aerodynamically, visually or culturally including biodiversity or habitat potential for example parkland or wood pasture.
 - For the purposes of this assessment, a hedgerow is described as any boundary line of trees or shrubs less than 5m wide at the base and are managed under a regular pruning regime.
 - For the purposes of this assessment woodland is described as a habitat where 'trees are the dominant plant form. The individual tree canopies generally overlap and interlink, often forming a more or less continuous canopy'¹. Woodlands however, are not just formed of trees and generally include a great variety of other plants. These will include 'mosses, ferns and lichens, as well as small flowering herbs, grasses and shrubs'².
- 3.3 An assessment of individual trees within groups, hedgerows and woodland 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, groups, hedgerows, and woodland 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.

¹ http://www.countrysideinfo.co.uk/woodland_manage/whatis.htm

² http://www.countrysideinfo.co.uk/woodland_manage/whatis.htm

- 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

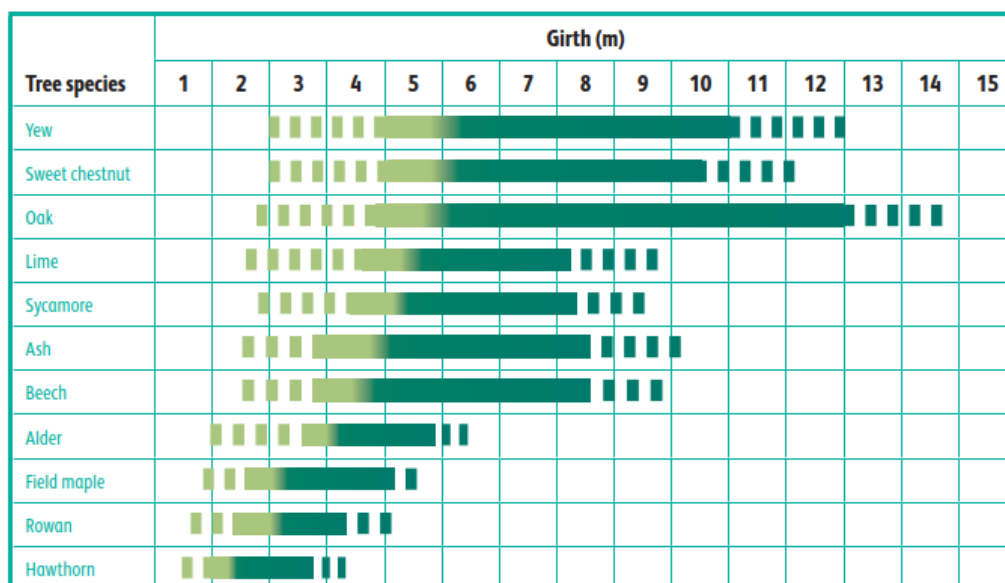
- 3.11 Various published methodologies are currently available for the identification of Ancient and Veteran trees which, due to the complexity and subjectivity of the process of defining and assessing these trees, often have conflicting definitions.
- 3.12 This assessment and the criterion for defining 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*³ 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.”



³ Ancient woodland, ancient trees and veteran trees: advice for making planning decisions - GOV.UK (www.gov.uk)

KEY: ■ Locally notable ■ Veteran/notable ■ Ancient ■ Late ancient

Figure 1: The chart of girth in relation to age and development classification of trees, as shown in Lonsdale (2013)⁴.

- 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.'*⁵

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 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 Hedgerows are identified as a Habitat of Principal Importance (HPI) as listed within Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006. The tree survey conducted, in accordance with BS5837, does not assess hedgerows against the Hedgerow Regulations 1997 or specifically from an ecological perspective, and is outside the scope of this assessment.
- 3.19 It may be necessary during detailed design to undertake further assessment and accurate positioning of woody species within tree groups and hedgerows to assist structural calculations for foundation design of structures in accordance with NHBC Chapter 4.2 Building near Trees.

⁴ Lonsdale, D. (Ed.). 2013). Ancient and other veteran trees: further guidance on management. London: The Tree Council.

⁵ 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 twenty-two individual trees, ten groups of trees and fifteen hedgerows were surveyed as part of the Arboricultural Assessment. Trees were surveyed as individual trees, groups, hedgerows and woodland as per the survey methodology.
- 4.2 Appendix A presents details of all individual trees, groups and hedgerows 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, groups, hedgerows and woodlands 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 stock ranged in quality from high (category A) to unsuitable (category U). The vast majority of trees were considered to be of low quality (category U) due to either their limited arboricultural merit or lack of landscape significance. A number of moderate (category B) trees were also recorded during the assessment.
- 4.6 A range of ages were identified, with the tree stock consisting of early-mature to over-mature specimens. The overall condition of the tree stock ranged from poor to good and it was relatively evenly distributed across the assessment area.
- 4.7 The majority of the tree stock was native in origin and had naturally colonised. The most abundant species were ash *Fraxinus excelsior* and hawthorn *Crataegus monogyna*. Other species observed during the assessment included field maple *Acer campestre*, English oak *Quercus robur*, holly *Ilex aquifolium*, crack willow *Salix fragilis*, wych elm *Ulmus glabra*, damson *Prunus insititia*, silver birch *Betula pendula*, rowan *Sorbus aucuparia*, wild cherry *Prunus avium*, laurel *Prunus laurocerasus*, Lawson Cypress *Chamaecyparis lawsoniana*, Scots pine *Pinus sylvestris*, dogwood *Cornus sanguinea*, blackthorn *Prunus spinosa*, English elm *Ulmus procera*, Norway spruce *Picea abies*, hazel *Corylus avellana* and elder *Sambucus nigra*.
- 4.8 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		0	G6	1
Category A (High Quality / Value)	T2, T3, T8, T9, T21, T22	6		0
Category B (Moderate Quality / Value)	T5, T11, T13, T20	4	G4, G5, G7	3
Category C (Low Quality / Value)	T1, T4, T6, T7, T10, T12, T14, T15, T16, T17, T18, T19	12	G1, G2, G3, G8, G9, G10, H1, H2, H3, H4, H5, H6, H7, H8, H9, H10, H11, H12, H13, H14, H15	21

Category A

- 4.1 Trees of high arboricultural quality were limited to six individuals. These were evenly distributed along the two access tracks that led towards the livery yard and comprised of mature English oak. For the most part, due to the good overall condition and positions within the landscape a retention category A was recorded. The were characteristic and typical for their species, with no obvious significant major defects being noted.

Category B

- 4.2 A total of four individual trees and three groups of trees were recorded as being moderate in quality and retention category B. These specimens were evenly distributed across the site and ranged from mature to over-mature in proportions. Collectively these trees provided key landscape features and contained only minor defects such as branch stubs, pruning wounds and established ivy growth. Due to the close proximity to each other, the majority of these trees have formed conjoining crowns which would limit the possibility of removing some specimens without impact upon others.
- 4.3 The common features observed throughout the tree stock comprised of features associated with continuous growth such as basal suckers and epicormic growth within crowns. Features resulting from natural abscission of material creating branch stubs, broken branches, branch socket cavities and bark wounds were also noted. Dead branches were also regularly observed in various proportions.

Category C

- 4.4 Trees of low quality comprised of twelve individuals, six groups and fifteen hedgerows. Individual specimens were predominantly outgrown boundary trees of limited merit. Tree groups and hedgerows were again either outgrown boundary features or maintained hedgerows between the field parcels.

- 4.5 Due to an active regime of boundary tree management, fourteen hedgerows were recorded across the site. The majority of these hedgerows were maintained by annual cutting which had created dense, clipped and consolidated structures. The hedgerows were all in good physical condition generally, albeit housing some typical minor broken branches, branch stubs and crossing and / or rubbing branches. Gaps could be identified where hedgerow stock had either failed or had become overwhelmed by undergrowth such as bramble.
- 4.6 Due to either the lack of management or low collective landscape value, this tree cover was regarded as retention category C.

Category U

- 4.7 A single group of trees (G6) was deemed to be unsuitable for retention due to its poor physiological condition.

Ancient and Veteran Trees

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

Statutory Considerations

- 4.9 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.
- 4.10 Under a TPO it is a criminal offence to cut down, top, lop, uproot or wilfully destroy a tree protected by that Order, or to cause or permit such actions, if carried out without the prior written consent of the acting LPA.
- 4.11 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, Hinckley and Bosworth Borough Council that there are no Tree Preservation Orders and Conservation Areas that would apply to any trees present on, or in close proximity to the assessment site and therefore no statutory constraints would apply to the development in respect of trees. Before any tree works are undertaken confirmation of the online information should be sought from the Local Authority.
- 4.12 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 the Monday 9th September 2024.

5.0 ARBORICULTURAL IMPACT ASSESSMENT

- 5.1 The following paragraphs present a summary of the tree survey and discussion of particular 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 Indicative Masterplan (P22-3085_DE_13_L) and seeks to outline the relationship between the proposals and the existing trees and hedgerows. The drawing shows the proposals for a residential development.
- 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 and hedgerows. The plan also identifies which trees would be required to be removed or retained as part of the proposed development.
- 5.4 A Detailed Access Arrangement Plan has also been provided to demonstrate the location of the primary access position in relation to the surrounding tree cover allowing the identification of any potential conflicts through implementation of the site access.
- 5.5 Table 2 below summarises the impact on tree stock and these impacts have been discussed in more detail following the table.

Table 2: Summary of Impact on Tree Stock

	Trees to be Removed	Reason/s for Removal	Total
Category U - Unsuitable	G7	G7 – Removed to facilitate driveway and facilitate landscaping.	1
Category A (High Quality / Value)	N/A	N/A	0
Category B (Moderate Quality / Value)	G5 (Partial Removal)	G5 – sections of G5 to be pruned back/removed to facilitate installation of outfall pipe.	1

	Trees to be Removed	Reason/s for Removal	Total
Category C (Low Quality / Value)	<u>Removed in Full</u> T4, T14, G10	T4 – Removed to facilitate primary access. T14 – Removed to facilitate development of secondary road layout. G10 – Removed to facilitate surface water outfall connection	3
	<u>Part Removal</u> <u>H1, H2, H5, H6, H7, H8, H11, H13</u>	H1 – Partial removal to facilitate upgrade of pavement. H2 – Partial removal to facilitate visibility splays. H5 – Partial removal to facilitate primary access and visibility splay. H6 – Partial removal for primary road. H7 – Partial removal for primary road and shared footpath/cycleway. H8 – Partial removal for access and drainage. H11 & H13 – Partial removal to facilitate primary road, dwellings and playground.	8

- 5.6 The layout has been constraint led and this approach has resulted in the vast majority of trees being retained and incorporated into the proposed development.
- 5.7 Where losses are recorded, these are made up of low to unsuitable quality material which can be adequately mitigated for from an arboricultural perspective with new tree planting.
- 5.8 The majority of removals take the form of sections of hedgerows being removed for access into and throughout the site. These were all low quality and can be mitigated for through new hedgerow planting.
- 5.9 To enable the proposed drainage strategy, small sections of G5 will require removing to install an outfall pipe leading from Attenuation Basin 2 to an existing ditch. The removals here are limited in scope and will not detract from the overall value of the group. The group will continue to provide

screening of the site. To facilitate the drainage connection from Attenuation Basin 1 to an existing ditch, two sections of the low-quality group G10 will require removal. The outfall pipe passes through the RPA of T21. The ground around this tree was heavily compacted and there was existing hardstanding in the location where the outfall connection is proposed. This may have inhibited root growth in this area however it is still likely that rooting material will be found in this area. At a detailed design stage, the method of installation should be considered in relation to the RPA of T21. Installing the pipe using directional drilling whilst under arboricultural supervision would greatly reduce any impact to T21.

- 5.10 The impact of the proposed development upon the existing tree cover should not be seen as detrimental to the overall value of the surveyed tree stock. The vast majority of trees are retained and no moderate to high specimens are impacted upon.

6.0 NEW TREE AND HEDGEROW PLANTING

- 6.1 As part of the subsequent reserve matters application, should the application be approved, an adequate quantity of structured tree planting should be provided to mitigate for any tree removal necessary to implement the development. The purpose and function of this new tree planting should be understood from the start of any design stages so that key objectives from a landscape perspective can also be achieved.
- 6.2 The landscaping scheme should consider the use of both native tree species (for their low maintenance requirements and nature conservation value) and ornamental species (for their contribution to urban design and amenity value). Species choices should be selected on the basis of their suitability for the final site use. Furthermore, during the design process consultation should be made with the Local Planning Authority to obtain information on their tree strategy and incorporate the planting proposals with any local policies and initiatives and/or Biodiversity Action Plans (BAP).
- 6.3 When deciding upon suitable tree species, careful consideration would need to be given to the following: ultimate height and canopy spread, form, habit, density of crown, potential shading effect, colour, water demand, soil type and maintenance requirements in relation to both the built form of the new development and existing properties.
- 6.4 Through careful species selection, the landscape scheme shall reduce the risk of trees being removed in the future on the grounds of nuisance. Nuisance can be perceived in a number of ways and vary from person to person however most commonly, within the context of trees, low overhanging branches, excessive shading, seasonal leaf fall and the misinformed perception that trees close to buildings cause damage.
- 6.5 Hedgerows are identified as a Habitat of Principal Importance (HPI) as listed within Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006. Consequently, it is important that the proposed scheme delivers a net gain in terms of linear hedgerows through new planting to compensate for any losses. Species should be native, and characteristic of the locality.

Rooting Environment and Soil Volumes

- 6.6 The success of any landscaping scheme relies on an adequate provision of a high-quality rooting environment within which trees can thrive and reach their full potential. Planting trees with due care and consideration can, in the long term, provide a greater return on a schemes green

investment and ensure trees remain healthy and grow to mature proportions. Healthy mature trees integrate well into the built environment; increase the maturity of the landscape; help provide a natural green and leafy urban environment in which people would want to reside whilst also benefiting local wildlife.

- 6.7 The planting of trees within confined urban environments should consider the use of appropriately designed planting pits specifically engineered to promote tree health and longevity. Crucially the aim will be to provide an adequate volume of quality soil for roots to suitably develop by calculating the amount of available soil volumes needed and selecting species whose mature size is compatible with the site. This is an integral component of the planning stage (Lindsey & Bassuk, 1991).

General Planting Recommendations

- 6.8 Wherever possible, following discussions with the developer and utility companies, common service trenches should be specified to minimise land take associated with underground service provision and facilitation access for future maintenance.
- 6.9 Tree planting should be avoided where they may obstruct overhead power lines or cables. Any underground apparatus should be ducted or otherwise protected at the time of construction to enable trees to be planted without resulting in future conflicts.

7.0 TREE PROTECTION MEASURES

- 7.1 Retained trees should be adequately protected during works through the erection of the requisite tree protection measures. These protection measures should be detailed as part of a site-specific Arboricultural Method Statement, which could be imposed as a condition of planning approval.
- 7.2 Measures to protect trees 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

- 7.3 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.
- 7.4 Barriers should be erected prior to commencement of any construction work and once installed, the area protected by fencing or other barriers will be regarded as a construction exclusion zone.
- 7.5 Any trees that are not to be retained as part of the proposals should be felled prior to the erection of protective barriers. Particular attention needs to be given by site contractors to minimise damage or disturbance to retained specimens.
- 7.6 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

- 7.7 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.
- 7.8 In most situations, fencing should comprise typical construction fencing panels attached to scaffold poles driven vertically into the ground. As illustrated in Appendix B.
- 7.9 Where site circumstances and the risk to retained trees do not necessitate the default level of protection an alternative will be specified appropriate to the level / nature of anticipated construction activity.

Protection outside the exclusion zone

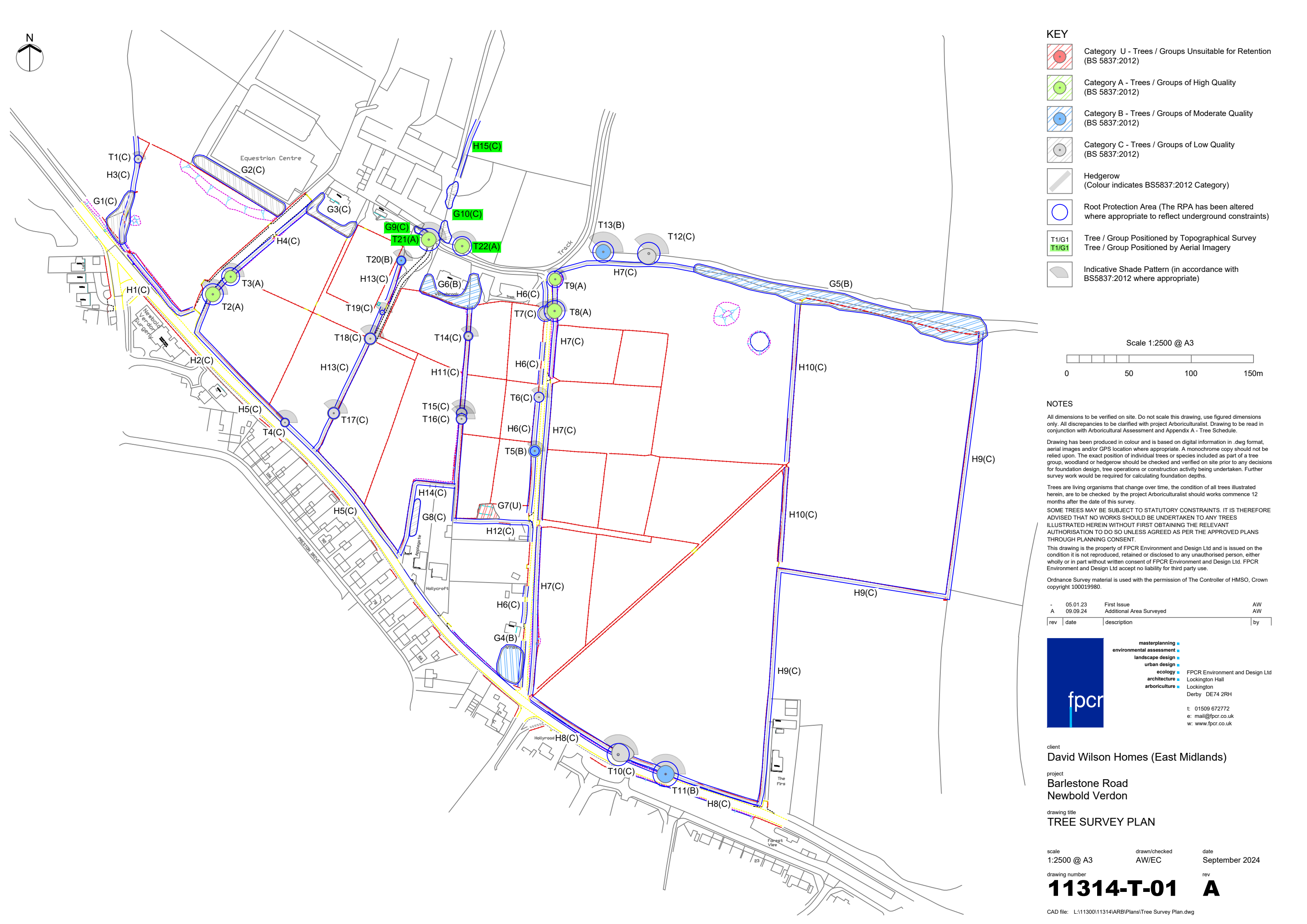
- 7.10 Once the areas around trees have been protected by the barriers, any works on the remaining site area may be commenced providing activities do not impinge on protected areas.
- 7.11 All weather notices should be attached to the protective fencing to indicate that construction activities are not 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.
- 7.12 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.
- 7.13 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.
- 7.14 Notice boards, telephone cables or other services should not be attached to any part of a retained tree.
- 7.15 Any trees which need to be felled adjacent to or are present within a continuous canopy of retained trees, must be removed with due care (it may be necessary to remove such trees in sections).

8.0 TREE MANAGEMENT

- 8.1 The layout of the development is currently reserved for subsequent approval. During a reserved matters application pursuant to layout, a review of the relationship between the layout and the retained trees should be undertaken by a qualified arboriculturist to assess the existing tree cover and prepare a schedule of tree works.
- 8.2 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*, where there is a potential for public access to satisfy the landowner's duty of care.

- 8.3 Landowners responsible for trees; especially those within the public domain, have a legal 'duty of care' to ensure that visitors and neighbours of their land are reasonably safe and that nobody comes to harm or injury, by his or her negligence, through taking measures to reduce risks as far as is 'reasonably practical' (The Health and Safety at Work Act 1974).
- 8.4 To ensure that risks are reduced as far as is 'reasonably practicable' it will be necessary that, a review of the relationship between retained trees and the new development should be undertaken by a qualified arboriculturist to assess the retained tree cover and prepare a schedule of tree works.
- 8.5 The Occupiers Liability Act (1957 and 1984) also places a 'duty of care' to ensure that no reasonably foreseeable harm takes place due to tree defects. That duty of care should be reasonable, proportionate, and reasonably practicable when managing the risk⁶.
- 8.6 It is currently expected that a suitably qualified Arboriculturalist or tree surveyor should inspect trees with an appropriate level of regularity. The purpose of the inspections is to determine whether a tree could foreseeably cause harm by virtue of its size and physical condition.
- 8.7 All tree works undertaken should comply with British Standard 3998:2010 and should therefore 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.
- 8.8 All vegetation and, particularly, woody vegetation proposed for clearance should be removed outside of the bird-breeding season (March - September inclusive) as all birds are protected under the Wildlife and Countryside Act, 1981 (as amended) whilst on the nest. Where this is not possible, vegetation should be checked for the presence of nesting birds prior to removal by an experienced ecologist.

⁶ The Health and Safety at Work Act 1974



Category U - Trees / Groups Unsuitable for Retention
(BS 5837:2012)



Category A - Trees / Groups of High Quality
(BS 5837:2012)



Category C - Trees / Groups of Low Quality
(BS 5837:2012)



Hedgerow
(Colour indicates BS5837:2012 Category)



Root Protection Area (The RPA has been altered where appropriate to reflect underground constraints)

Tree / Group Positioned by Topographical Survey
Tree / Group Positioned by Aerial Imagery

Indicative Shade Pattern (in accordance with BS5837:2012 where appropriate)

Scale 1:2500 @ A3



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.

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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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-	05.01.23	First Issue	AW
A	09.09.24	Additional Area Surveyed	AW
rev	date	description	by



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drawing title

TREE SURVEY PLAN

scale
1:2500 @ A3

drawn/checked
AW/EC

date
September 2024

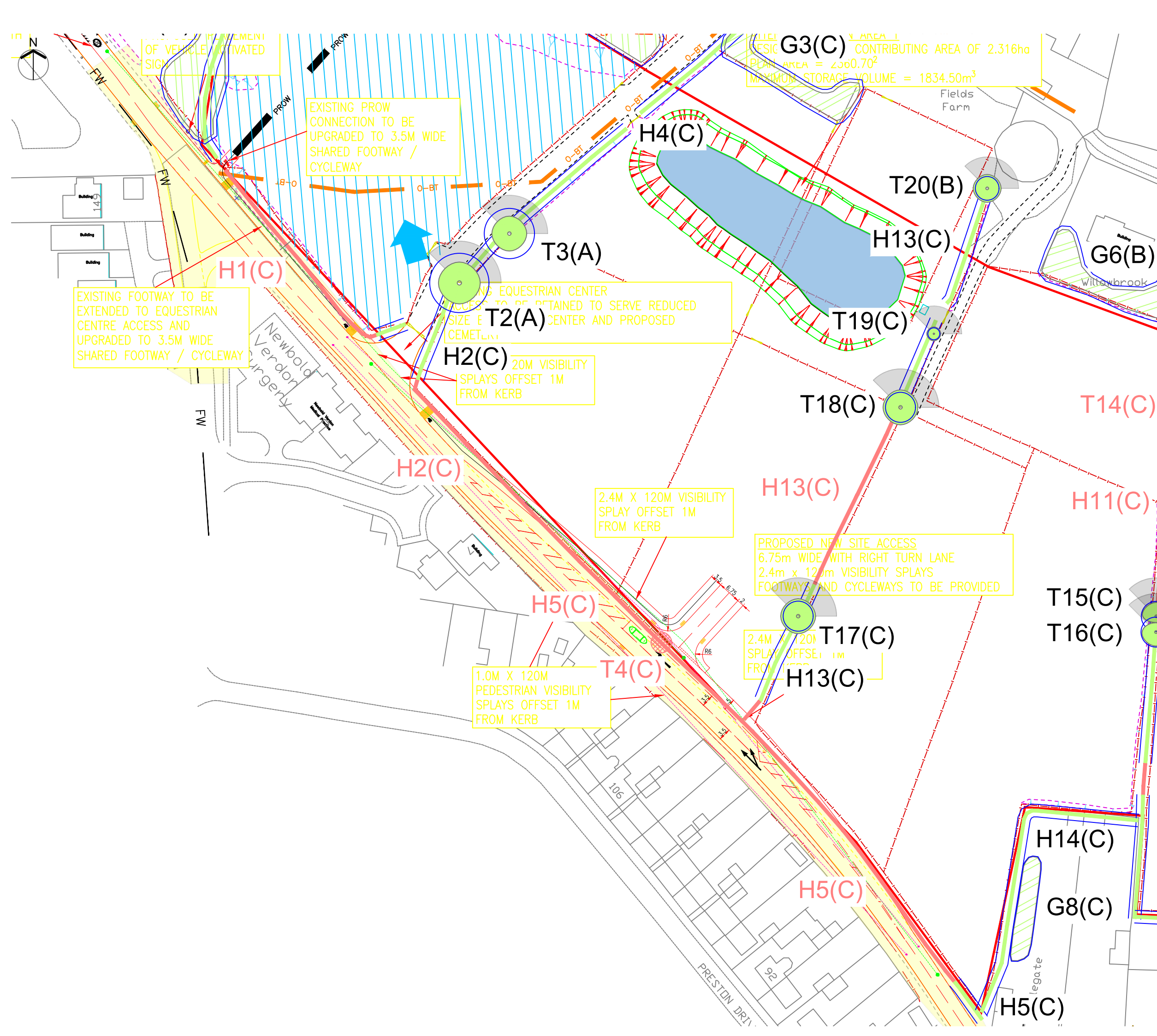
drawing number

rev

11314-T-01

A

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KEY

Tree/Group to be Retained

Tree/Group proposed to be removed subject to relevant permissions

Hedgerow Proposed to be Retained and Incorporated into the New Development

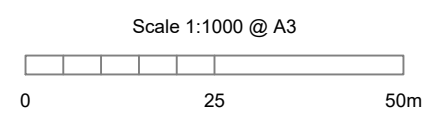
Hedgerow proposed to be removed subject to relevant permissions

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

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14.03.24

First Issue

AW

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fpcr

masterplanning

environmental assessment

landscape design

urban design

ecology

architecture

arboriculture

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drawing title

TREE RETENTION PLAN

Access

scale

1:500 @ A3

drawn/checked

AW/EC

date

March 2024

drawing number

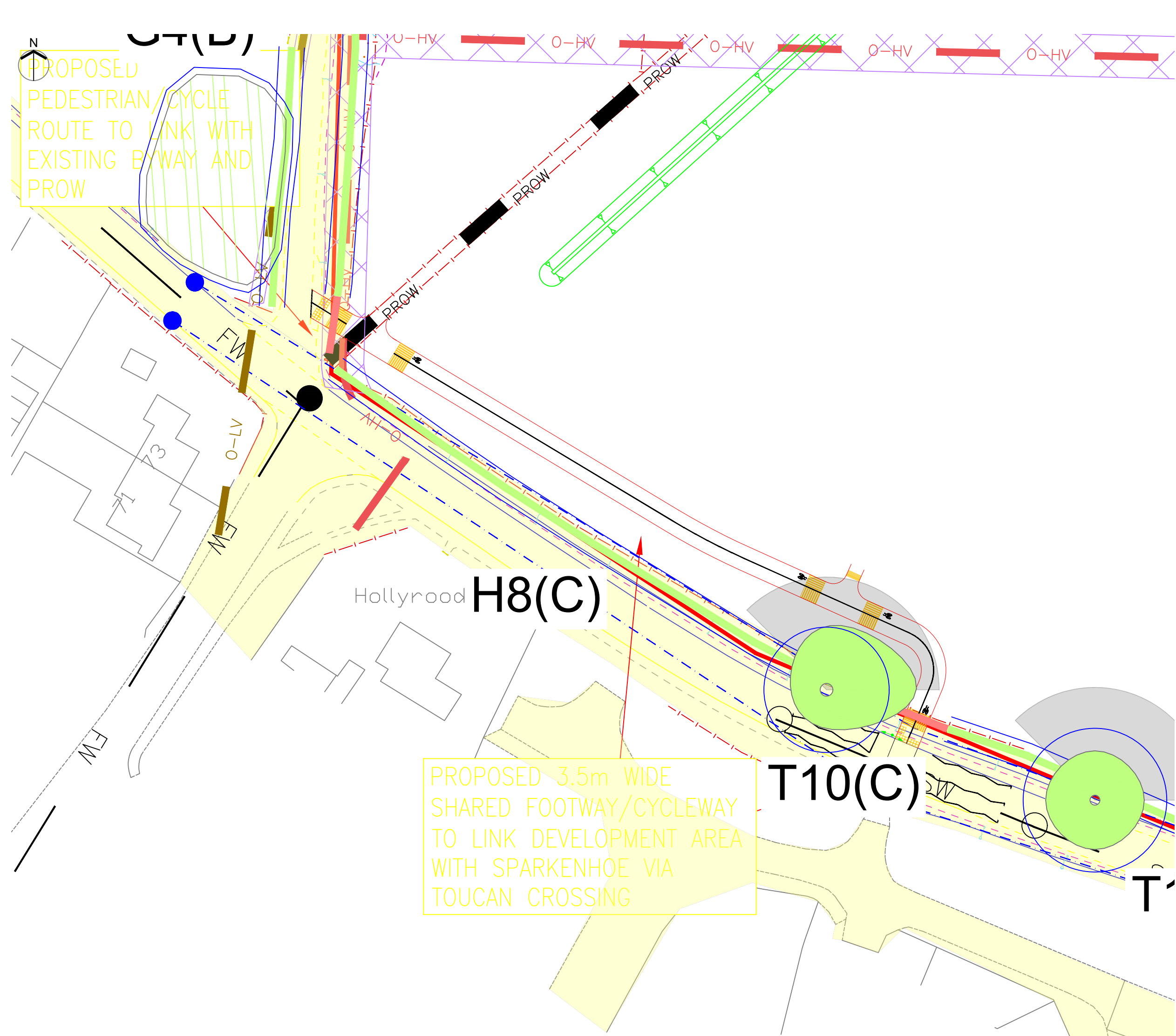
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rev

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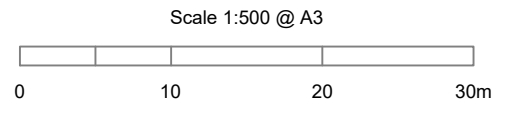
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PROPOSED
PEDESTRIAN/CYCLE
ROUTE TO LINK WITH
EXISTING BYWAY AND
PROW

PROPOSED 3.5m WIDE
SHARED FOOTWAY/CYCLEWAY
TO LINK DEVELOPMENT AREA
WITH SPARKENHOE VIA
TOUCAN CROSSING

- KEY
- Tree/Group to be Retained
 - Hedgerow Proposed to be Retained and Incorporated into the New Development
 - Hedgerow proposed to be removed subject to relevant permissions
 - Root Protection Area (The RPA has been altered where appropriate to reflect underground constraints)
 - Individual / Group Number and BS5837:2012 Category
 - Indicative Shade Pattern (in accordance with BS5837:2012 where appropriate)



NOTES

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rev	date	description	by

- masterplanning
- environmental assessment
- landscape design
- urban design
- ecology
- architecture
- arboriculture

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drawing title
TREE RETENTION PLAN
Access

scale
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drawn/checked
AW/EC

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March 2024

drawing number
11314-T-04

rev
-

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	

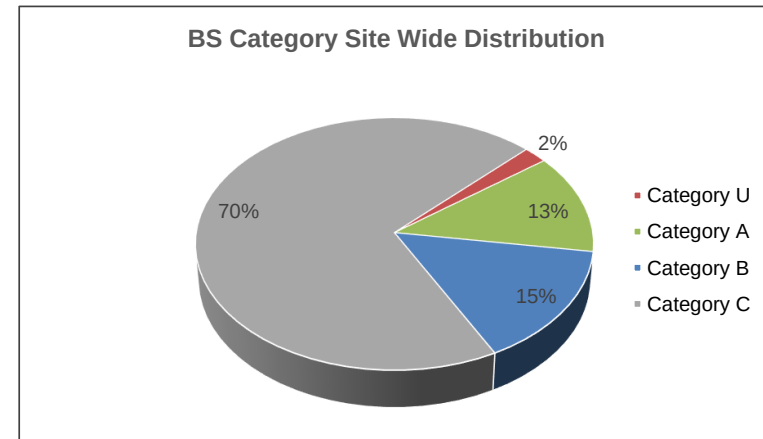
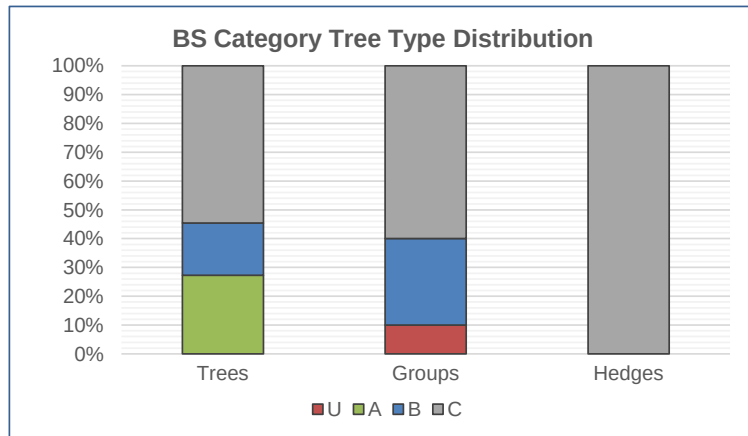
Structural Condition	Physiological Condition	Root Protection Area (RPA)
Good - No significant structural defects	Good - No significant health problems	• The RPA Radius column provides the extent of an equivalent circle from the centre of the stem (m). • The RPA is calculated using the formulae described 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		0	G6	1
Category A	T2, T3, T8, T9	6		0
Category B	T5, T11, T13, T20	4	G4, G5, G7	3
Category C	T1, T4, T6, T7, T10, T12, T14, T15, T16, T17, T18, T19	12	G1, G2, G3, G8, H1, H2, H3, H4, H5, H6, H7, H8, H9, H10, H11, H12, H13, H14	21
	Total	22	Total	25

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	Field Maple Acer campestre	6	est 270	3	M	F	Hedgerow specimen Large wound on Eastern side of stem likely to have been caused by flail management Typical crown form	33	3.2	C (i)
T2	English Oak Quercus robur	12	est 710	6	M	G	Gravel driveway 1.5m to west Light ivy cover throughout Epicormic growth and minor deadwood throughout canopy No obvious major defects Prominent tree and visible from the road	228	8.5	A (i)
T3	English Oak Quercus robur	11	est 600	5	M	G	Gravel driveway 1.5m to west Light ivy cover throughout Epicormic growth and minor deadwood throughout canopy No obvious major defects Prominent tree and visible from the road Small diameter pruning wounds noted on the western side of the canopy Overhead cable running through crown	163	7.2	A (i)
T4	Holly Ilex aquifolium	10	est 7x 110	3	M	F	Outgrown hedgerow specimen Dieback noted Extensive flail damage	38	3.5	C (i)
T5	Field Maple Acer campestre	8	est 300	5	M	F	Hedgerow specimen Light flail damage No major defects Typical crown form	41	3.6	B (i)
T6	Ash Fraxinus excelsior	8	est 340	4	EM	F	Typical crown with small diameter broken branches throughout Extensive epicormic growth	52	4.1	C (i)

Tree No	Species	Height	Stem Dia.	Crown Radius	Age Class	Overall Condition	Structural Condition	RPA	RPA Radius	BS5837 Cat
T7	Ash Fraxinus excelsior	10	est 520	5	M	F	Typical crown with small diameter broken branches throughout Extensive epicormic growth Pruning wounds noted Electrical cable running through crown	122	6.2	C (i)
T8	English Oak Quercus robur	10	est 700	6	M	F	Typical crown Dense ivy prevented a full inspection Minor deadwood Pruning wounds noted Electrical cable running through crown	222	8.4	A (i)
T9	English Oak Quercus robur	9	est 550	5	M	F	Typical crown Dense ivy prevented a full inspection Minor deadwood Pruning wounds noted Twin stemmed from 2m with strong union Established epicormic growth located around Pruning wounds	137	6.6	A (i)
T10	Ash Fraxinus excelsior	16	est 740	N - 6 S - 5 E - 9 W - 2	M	P / F	Situated within H8 Dense ivy from ground level to upper crown prevented a full inspection Large branch stubs on Northern side has resulted from a limb snapping out during storm conditions Major and kind deadwood throughout with signs of dieback and epicormic growth noted in canopy Hazard beam on Eastern side at 6m	248	8.9	C (i)
T11	English Oak Quercus robur	16	est 850	7	M	P / F	Situated within H8 Dense ivy from ground level to upper crown prevented a full inspection Fence nailed to Northern side of stem Browsing damage noted on Northern side Major and minor deadwood Torn out limbs within centre of canopy have resulted in large events and exposed heartwood	327	10.2	B (i)

Tree No	Species	Height	Stem Dia.	Crown Radius	Age Class	Overall Condition	Structural Condition	RPA	RPA Radius	BS5837 Cat
T12	Crack Willow Salix fragilis	16	est 500 500 240	N - 4 S - 8 E - 4 W - 6	M	F	Dense ivy from ground level to upper crown prevented a full inspection Typical form and features Torn out and split limbs	252	9.0	C (i)
T13	English Oak Quercus robur	16	est 700	6	M	F	Multi leadered squat form Dense ivy from ground level to upper crown prevented a full inspection Law crown with clearance under 1m on footpath side Broken branches and minor deadwood	222	8.4	B (i)
T14	Field Maple Acer campestre	8	est 310	3	M	F	Multi leadered hedgerow specimen Typical crown with no major defects	43	3.7	C (i)
T15	Ash Fraxinus excelsior	11	est 360	N - 4 S - 0 E - 4 W - 4	M	F	Unable to gain access due to livestock and electric fencing No obvious major defects Minor deadwood and ivy throughout	59	4.3	C (i)
T16	Ash Fraxinus excelsior	11	est 360	N - 0 S - 4 E - 4 W - 4	M	F	Unable to gain access due to livestock and electric fencing No obvious major defects Minor deadwood and ivy throughout	59	4.3	C (i)
T17	Ash Fraxinus excelsior	11	est 360	5	M	F	No obvious major defects Minor deadwood Flail damage	59	4.3	C (i)
T18	Ash Fraxinus excelsior	11	est 360	5	M	F	No obvious major defects Minor deadwood Flail damage Dense ivy and Holly growing up stem	59	4.3	C (i)

Tree No	Species	Height	Stem Dia.	Crown Radius	Age Class	Overall Condition	Structural Condition	RPA	RPA Radius	BS5837 Cat
T19	Holly Ilex aquifolium	8	est 140	2	M	F	Heavily flailed Limited value	9	1.7	C (i)
T20	Field Maple Acer campestre	9	est 280	4	M	F	Broken branches evident Characteristic for species Compacted ground at the base Situated offsite Typical crown form	35	3.4	B (i)
T21	English Oak Quercus robur	14	est 780	6	M	F	Hardstanding directly to north of stem Compacted ground to east and south Extensive epicormic growth throughout Dense only on stem prevented a full inspection Minor deadwood throughout and occasional broken branches	275	9.4	A (i)
T22	English Oak Quercus robur	12	est 640	6	M	F	Dense ivy from ground level to upper canopy Twin stemmed from 4m Typical crown form Slight dieback	185	7.7	A (i)

Group No	Species	Height	Stem Dia.	Crown Radius	Age Class	Overall Condition	Structural Condition	RPA	RPA Radius	BS5837 Cat
GROUPS OF TREES										
G1	Hawthorn Crataegus monogyna Wych Elm Ulmus glabra Damson Prunus insititia Holly Ilex aquifolium	6	avg 150	3	M	F	Small self set boundary group Dense undergrowth and brambles at base LV cables run through Northern section of group Occasional dead elm	10	1.8	C (ii)
G2	Silver Birch Betula pendula Rowan Sorbus aucuparia	2	avg 90	1	Yng	F	New planting on small embankment to the south of equestrian centre Occasional failed specimen	4	1.1	C (ii)
G3	Wild Cherry Prunus avium Laural Prunus Laurocerasus Rowan Sorbus aucuparia Lawson Cypress Chamaecyparis lawsoniana Scots Pine Pinus sylvestris Dogwood Cornus sanguinea	7	avg 300	4	M	F	Group of planting in front of dwelling Unable to gain access to trees due to their offsite position No major defects noted Provide moderate screening value	41	3.6	C (ii)
G4	Silver Birch Betula pendula Laural Prunus Laurocerasus Weeping Willow Salix x sepulcralis 'Chrycosoma' Leyland Cypress Cupressocyparis leylandii	16	avg 480	5	M	F	Group of planting in offsite from garden Unable to gain access to trees due to their offsite position No major defects noted Small quantities of minor deadwood	104	5.8	B (ii)

Group No	Species	Height	Stem Dia.	Crown Radius	Age Class	Overall Condition	Structural Condition	RPA	RPA Radius	BS5837 Cat
G5	Blackthorn Prunus spinosa Elder Sambucus nigra Hawthorn Crataegus monogyna English Elm Ulmus procera Holly Ilex aquifolium	12	avg 400	5	EM / M	F	Offsite group of trees situated either side of PRow Dense ivy and undergrowth throughout Small diameter broken branches and deadwood noted Pruning wounds noted where material has been pruned back to create footpath clearance Moderate landscape value Predominantly elm with thorn and elder understory	72	4.8	B (ii)
G6	Elder Sambucus nigra	5	avg 200	3	OM	D / P	Group of dead/dying trees situated around dilapidated barn No arboricultural or landscape value	N/A	N/A	U
G7	Ash Fraxinus excelsior Elder Sambucus nigra Sycamore Acer pseudoplatanus Wych Elm Ulmus glabra Holly Ilex aquifolium Leyland Cypress Cupressocyparis leylandii Norway Spruce Picea abies Scots Pine Pinus sylvestris	14	avg 480	7	OM	F	Situated to the north of site boundary and within front garden Provides moderate landscape benefit and screens property	104	5.8	B (ii)
G8	Apple Malus domestica	8	avg 350	4	M / OM	F	Offsite group of planted trees Limited landscape or arboricultural value Typical forms and features	55	4.2	C (ii)

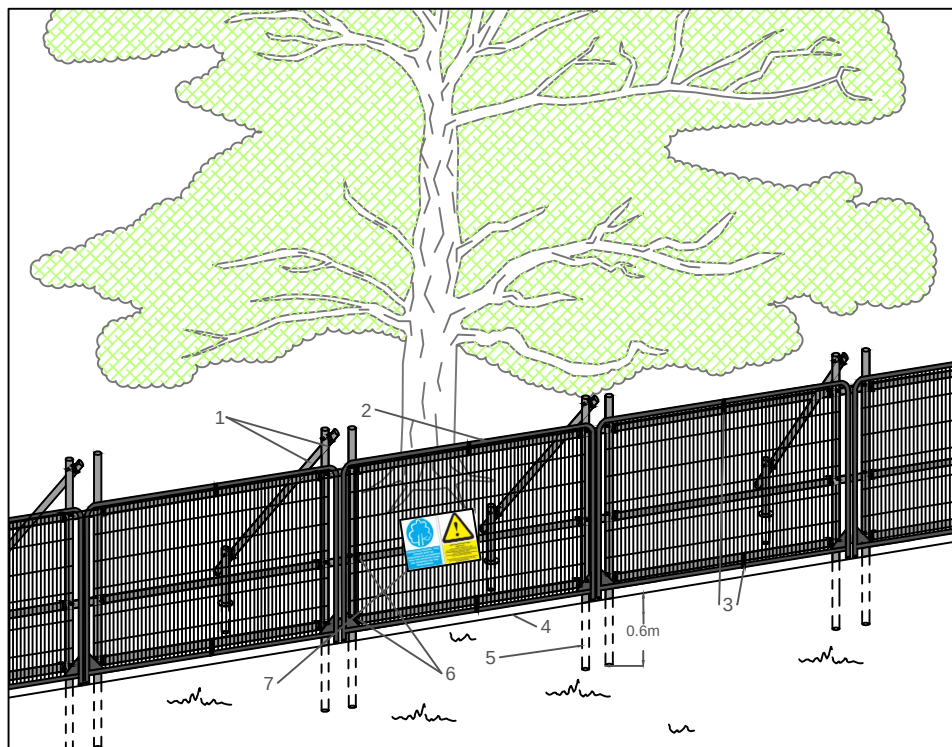
Group No	Species	Height	Stem Dia.	Crown Radius	Age Class	Overall Condition	Structural Condition	RPA	RPA Radius	BS5837 Cat
G9	Hawthorn Crataegus monogyna Holly Ilex aquifolium	8	est 200	3	M	F	Outgrown trees adjacent to stable blocks Tyocial form and features Pruned away from access track and stables	18	2.4	C (ii)
G10	Elder Sambucus nigra Hawthorn Crataegus monogyna Hazel Corylus avellana Holly Ilex aquifolium	4	est 180	2	M	F	Outgrown trees that may have once formed as a managed hedgerow Hardstanding at base Broken branches Very sporadic Limited arboricultural value	15	2.2	C (ii)

Hedge No	Species	Height	Stem Dia.	Crown Radius	Age Class	Overall Condition	Structural Condition	RPA	RPA Radius	BS5837 Cat
HEDGEROWS										
H1	Hawthorn Crataegus monogyna	1	est 6x 60	0.5	M	F	Maintained hedgerow Brambles throughout	10	1.8	C (ii)
H2	Hawthorn Crataegus monogyna	1	est 6x 60	0.5	M	F	Maintained hedgerow Brambles throughout	10	1.8	C (ii)
H3	Elder Sambucus nigra Hawthorn Crataegus monogyna Holly Ilex aquifolium	1	est 6x 60	0.5	M	F	Maintained hedgerow Brambles throughout	10	1.8	C (ii)
H4	Ash Fraxinus excelsior English Oak Quercus robur Hawthorn Crataegus monogyna Wych Elm Ulmus glabra Holly Ilex aquifolium Rowan Sorbus aucuparia	1.5	est 6x 60	0.5	M	F	Maintained hedgerow Brambles throughout Some outgrown sections	10	1.8	C (ii)
H5	Ash Fraxinus excelsior Elder Sambucus nigra Hawthorn Crataegus monogyna	2	est 6x 60	0.5	M	F	Maintained hedgerow Brambles throughout	10	1.8	C (ii)

Hedge No	Species	Height	Stem Dia.	Crown Radius	Age Class	Overall Condition	Structural Condition	RPA	RPA Radius	BS5837 Cat
H6	Ash Fraxinus excelsior Blackthorn Prunus spinosa Elder Sambucus nigra Hawthorn Crataegus monogyna Hazel Corylus avellana Holly Ilex aquifolium	2	est 6x 60	0.5	M	F	Maintained hedgerow Brambles throughout Dense ivy Outgrown and unmaintained sections to the north Occasional gaps noted Situating to the west of access track	10	1.8	C (ii)
H7	Ash Fraxinus excelsior Blackthorn Prunus spinosa Elder Sambucus nigra Hawthorn Crataegus monogyna Wych Elm Ulmus glabra Hazel Corylus avellana	2	est 6x 60	0.5	M	F	Maintained hedgerow Brambles throughout Dense ivy Occasional gaps noted Situating to the east of access track	10	1.8	C (ii)
H8	Blackthorn Prunus spinosa Elder Sambucus nigra Hawthorn Crataegus monogyna Wych Elm Ulmus glabra Holly Ilex aquifolium	2	est 6x 60	0.5	M	F	Maintained hedgerow Brambles throughout	10	1.8	C (ii)

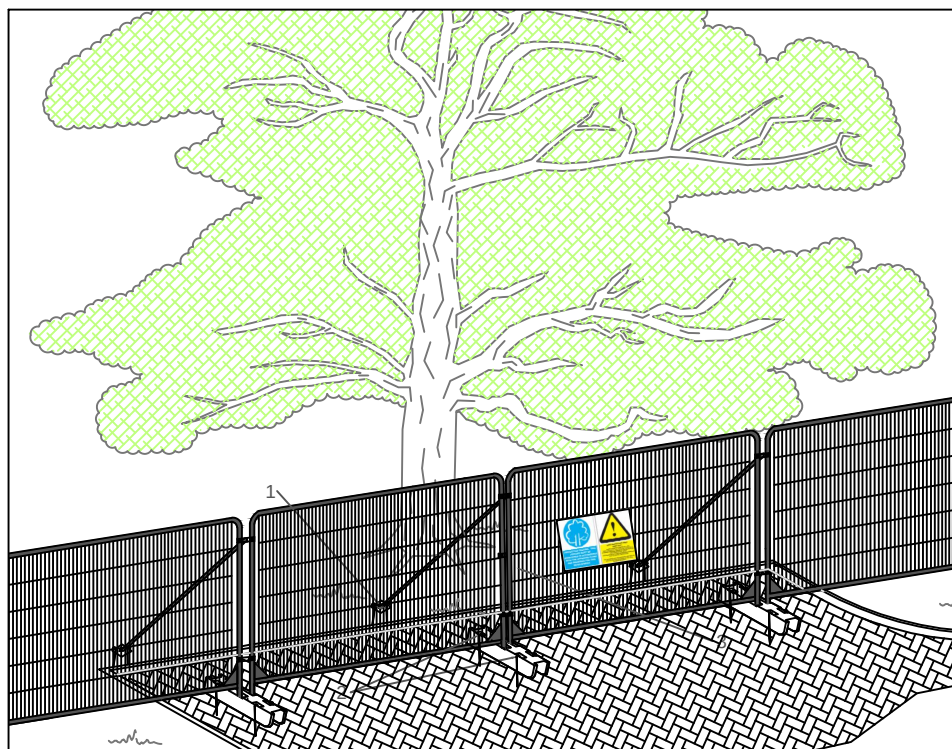
Hedge No	Species	Height	Stem Dia.	Crown Radius	Age Class	Overall Condition	Structural Condition	RPA	RPA Radius	BS5837 Cat
H9	Blackthorn Prunus spinosa Elder Sambucus nigra Hawthorn Crataegus monogyna Wych Elm Ulmus glabra Holly Ilex aquifolium	2	est 6x 60	0.5	M	F	Maintained hedgerow Brambles throughout	10	1.8	C (ii)
H10	Elder Sambucus nigra Hawthorn Crataegus monogyna Holly Ilex aquifolium	4	est 140	0.5	M	F	Maintained laterally Gaps present Outgrown in sections	9	1.7	C (ii)
H11	Blackthorn Prunus spinosa Elder Sambucus nigra Hawthorn Crataegus monogyna Wych Elm Ulmus glabra Holly Ilex aquifolium	2	est 6x 60	0.5	M	F	Maintained hedgerow Brambles throughout Gaps noted	10	1.8	C (ii)
H12	Elder Sambucus nigra Wild Privet Ligustrum vulgare	4	est 6x 60	0.5	M	F	Outgrown unmaintained hedgerow	10	1.8	C (ii)

Hedge No	Species	Height	Stem Dia.	Crown Radius	Age Class	Overall Condition	Structural Condition	RPA	RPA Radius	BS5837 Cat
H13	Blackthorn Prunus spinosa Hawthorn Crataegus monogyna Holly Ilex aquifolium	2	est 6x 60	0.5	M	F	maintained hedgerow	10	1.8	C (ii)
H14	Blackthorn Prunus spinosa Hawthorn Crataegus monogyna Holly Ilex aquifolium	2.5	est 6x 60	0.5	M	F	maintained hedgerow Occasional young self set standard within hedgerow	10	1.8	C (ii)
H15	Blackthorn Prunus spinosa Elder Sambucus nigra Hawthorn Crataegus monogyna	2	est 6x 60	0.5	M	P	Very poor quality hedgerow Dense brambles and undergrowth throughout Little signs of management	10	1.8	C (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

NOTES

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APPENDIX B PROTECTIVE FENCING SPECIFICATIONS

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