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# ARBORICULTURAL ASSESSMENT

Client

**Avant Homes**

Project

**Thurnscoe Bridge Lane,  
Thurnscoe**

Date

**November 2024**

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Rev	Issue Status	Prepared/Date	Approved/Date
-	Draft	EC/24/10/24	AW/24/10/24
A	Final	EC / 01/11/24	AW / 01/11/24

## 1.0 INTRODUCTION

- 1.1 This report has been prepared by FPCR Environment and Design Limited on behalf of Avant Homes to present the findings of an Arboricultural Assessment and survey of trees located at land off Thurnscoe Bridge Lane, Thurnscoe (hereafter referred to as the site), OS Grid Ref SE 453 049.

### Site Description

- 1.2 Situated to the south of the village of Thurnscoe in the metropolitan borough of Barnsley, the site comprises a single agricultural field parcel which abuts Thurnscoe Bridge Lane along its eastern edge, and the rear gardens of residential dwellings on Derry Grove to the north. A tree lined watercourse forms the western boundary beyond which lies a residential development, and the site is separated from an adjoining field parcel to the south by a bridleway along a former railway line.
- 1.3 An additional field agricultural parcel to the southwest of the bridleway was included as part of the tree survey, but now falls outside of the site boundary and is not discussed further.

### Planning History

- 1.4 The site is identified within the Local Plan for Barnsley Metropolitan Borough Council under Policy HS52 (Land west of Thurnscoe Bridge Lane and south of Derry Grove) for 308 dwellings and is afforded significant weight. `

### Scope of Assessment

- 1.5 A tree survey and assessment of existing trees was carried out by FPCR Environment and Design on 19<sup>th</sup> 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).
- 1.6 This report has been produced to accompany a detailed planning application for 296 dwellings. 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'.

### 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 Barnsley Local Plan 2019 there are several policies relating to trees. The following lists the most relevant.

*Policy GD1 General Development*

*Proposals for development will be approved if:*

*Existing trees that are to remain on site are considered in the layout in order to avoid overshadowing.*

*Policy BIO1 Biodiversity and Geodiversity*

*Development will be expected to conserve and enhance the biodiversity and geological features of the borough by:*

*Protecting ancient and veteran trees where identified*

*Development which may harm a biodiversity or geological feature or habitat, including ancient woodland and aged or veteran trees found outside ancient woodland, will not be permitted unless effective mitigation and/or compensatory measures can be ensured.*

- 2.7 The adopted Barnsley Local Plan 2019 also provides specific guidance under the site allocation (HS52) that:

*The development will be expected to:*

*Ensure that the trees and hedgerows around the periphery of the site, in particular on the southern boundary are retained.*

### 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 and hedgerows 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.

3.3 An assessment of individual trees within groups and hedgerows 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 and hedgerows 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:
- Subcategory (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.
  - Subcategory (ii) trees, groups or woodlands of particular visual importance as arboricultural and / or landscape features.
  - Subcategory (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:
- Subcategory (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.
  - Subcategory (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.
  - Subcategory (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:
- Subcategory (i) unremarkable trees of very limited merit or such impaired condition that they do not qualify in higher categories.
  - Subcategory (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.
  - Subcategory (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.

3.13 “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

3.14 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).

3.15 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<sup>1</sup> 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.”

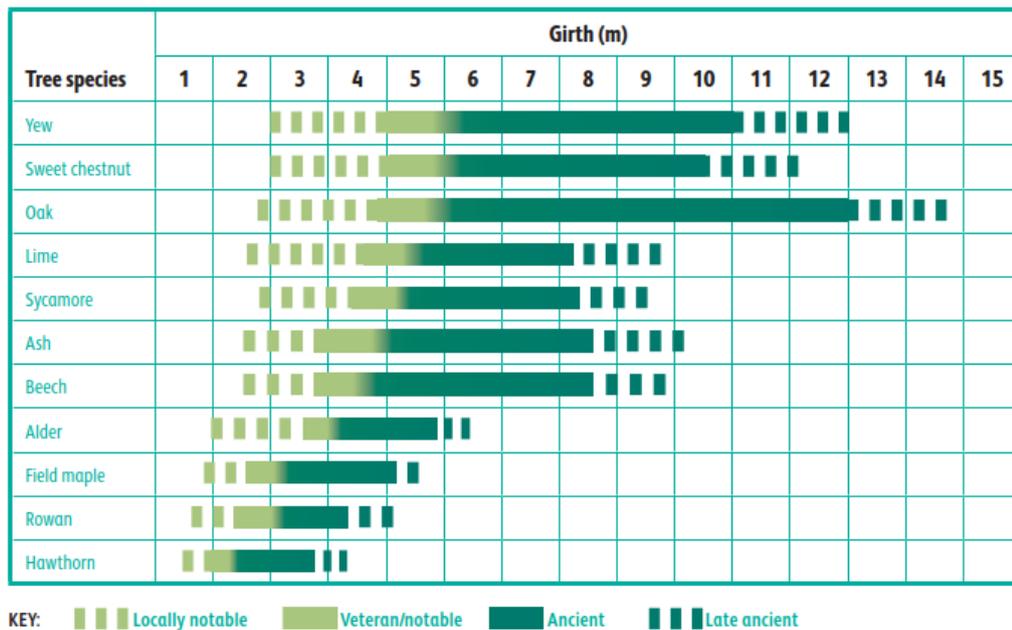


Figure 1: The chart of girth in relation to age and development classification of trees, as shown in Lonsdale (2013)<sup>2</sup>.

3.16 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:

3.17 ‘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.’<sup>3</sup>

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

<sup>2</sup> Lonsdale, D. (Ed.). 2013). Ancient and other veteran trees: further guidance on management. London: The Tree Council.

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

### **Considerations and Limitations of the Tree Survey**

- 3.18 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.
- 3.19 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.
- 3.20 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.
- 3.21 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.

## 4.0 RESULTS

- 4.1 A total of thirty-five individual trees, twelve groups of trees, and two hedgerows were surveyed as part of the Arboricultural Assessment. Trees were surveyed as individual trees, groups and hedgerows 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 and hedgerows 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 largely restricted to the field boundaries, except for a single tree situated centrally within the field parcel and three trees situated alongside a track on the north edge of the field parcel. A line of trees was present along the boundary with Thurnscoe Bridge Lane, and larger tree groups were present along the bridleway which included mature planting associated with the former railway and areas of younger planting.
- 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		0	G12	1
Category A (High Quality / Value)	T35	1		
Category B (Moderate Quality / Value)	T1, T3, T4, T5, T6, T7, T9, T14, T15, T16, T17, T18, T19, T21, T22, T23, T24, T25, T26, T28, T29, T30, T34	23	G2, G3, G4, G5, G6, G9, G10	7
Category C (Low Quality / Value)	T2, T8, T10, T11, T12, T13, T20, T27, T31, T32, T33	11	G1, G7, G8, G11, H1, H2	6

- 4.7 Thirteen individual trees (T1-T13) and two tree groups (G1 and G2) were recorded along the site's eastern boundary alongside Thurnscoe Bridge Lane. This tree cover ranged in quality from moderate (Category B) to low (Category C) and included a mixture of species which included turkey oak *Quercus cerris*, sycamore *Acer pseudoplatanus*, common lime *Tilia x europaea*, ash *Fraxinus excelsior*, beech *Fagus sylvatica* and English oak *Quercus robur*.
- 4.8 T14, a mature English oak stood centrally within the eastern field parcel and displayed several features which can be associated with veteran trees. These features included the presence of a decay fungus *Ganoderma resinaceum*, cavities, splits and patches of missing bark. While these features can be an indication of the tree being veteran when attributed to age related decline, in this instance these features are the result of external factors with it being evident that T14 had previously been struck by lightning and the ground around the base has been regularly ploughed close to the stem.
- 4.9 T14 also had a stem diameter which is below the veteran range as set in Figure 1 and with these potential veteran features not being attributed to age related decline which allows the niche and specialist habitat to develop over several years and gives veteran trees their status as irreplaceable habitats. T14 was not considered a veteran tree but did poses conservation value being recorded as Category B(iii).
- 4.10 Tree cover along the bridleway which formed the southern boundary of the site was all recorded as moderate quality (Category B) for its collective landscape value form an arboricultural perspective. This tree cover which included a mixture of mature tree groups associated with the former railway (G3, G9 and G10) and younger planted tree groups (G4 and G5) provided a strong arboricultural feature for users of the bridleway but were situated to make little visual contribution to the wider locality.
- 4.11 Mature crack willow *Salix fragilis* and alder *Alnus glutinosa* (G11) had established within the low laying ground alongside a water course and the site's western boundary. It was evident that these trees were under no management regime with failed stems being present throughout the group. G11 was assessed as low quality (Category C) due to its current condition and may require future management, which could include coppicing, should public access to these groups be increased.
- 4.12 Three mature trees (T33, T34 and T35) stood within the site close to the northern boundary, which abutted the rear gardens of residential properties on Derry Grove. T34 a mature sycamore was considered in a fair overall condition with basal growth restricting access to the base and past pruning to raise the crown above an access track which passed beneath its crown. T35 a mature turkey oak was of large proportions and considered a particularly good example of the species being recorded as high quality (Category A). T33 a multi stemmed sycamore was considered of limited arboricultural value and recorded as low quality (Category C).

### **Ancient and Veteran Trees**

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

### **Statutory Considerations**

- 4.14 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.
- 4.15 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.
- 4.16 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, Barnsley Metropolitan 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.
- 4.17 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 3<sup>rd</sup> October 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 Planning Layout and seeks to outline the relationship between the proposals and the existing trees and hedgerows. The drawing shows the proposals for a residential development of 296 dwellings.
- 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 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 for Removal	Total
Category B (Moderate Quality / Value)	T4	T4 – Removal to facilitate vehicular and pedestrian access to the site.	4
	T5	T5 – Removal to facilitate vehicular and pedestrian access to the site.	
	T6	T6 – Removal to facilitate vehicular and pedestrian access to the site.	
	T7	T7 – Removal to facilitate vehicular and pedestrian access to the site.	
	G2	G2 – Removal to facilitate vehicular and pedestrian access to the site.	1
Category C (Low Quality / Value)	T8	T8 – Removal to facilitate vehicular and pedestrian access to the site.	2
	T33	T33 – Removal to facilitate construction of Plot 267	1
	G1	G1 – Partial removal of section to facilitate vehicular and pedestrian access to site.	
	H1	H1 – Partial removal of section to facilitate vehicular and pedestrian access to site.	1

- 5.5 A total of five individual trees (T4, T5, T6, T7 & T8), one tree group (G2) and the part removal of another group and hedgerow (G1 & H1) is necessary to facilitate vehicular and pedestrian access to the site from Thurnscoe Bridge Lane. This is only boundary where an access could feasibly be located, and its position has been informed by factors including highway safety.

- 5.6 The retention of tree cover to the north and south of the proposed new access will maintain a level of tree cover along Thurnscoe Bridge Lane, screening the development from the road. Mitigation for the removal of these trees would be provided in the form of a new street tree planting along the main roads within the development in accordance with NPPF paragraph 136.
- 5.7 A single tree within the site area is shown to be removed to facilitate the development, T33 a mature multi stemmed sycamore which was recorded as being of low quality and of limited arboricultural value. The removal of this tree should raise no objection from an arboricultural perspective with the development having been designed around the retention of higher value trees within the site.
- 5.8 Individual trees T14, T34 and T35 all stood within the main site area and the development has been designed around the retention of this tree cover seeing these trees retained within areas of incidental public open space within the main development area. These three trees have all been provided sufficient space from proposed development to allow them to continue to contribute to the setting of the site without the need for regular management or pruning works.
- 5.9 A footpath link is shown to pass through the RPA of T14 to provide a pedestrian link through the site. Situated within the RPA of this retained tree, it is necessary that this footpath be constructed using tree friendly construction techniques, which will allow for it to be installed as shown while resulting in minimal disturbance to T14 or its rooting area.
- 5.10 Two car parking bays are also shown to intrude within the RPA of T14 by less than 1m. It is not feasible for tree friendly construction techniques to be used in the situation due to levels, with these bays being accessed by a driveway directly from the main spine road.
- 5.11 The ground around T14 has been subject to regular ploughing which is likely to have restricted shallow root development. It is our professional judgement that these two parking bays could be constructed using conventional construction techniques, with this minor excavation 9m, from the base of T14, within ground that is unlikely to contain tree roots would be highly unlikely to be of any detriment to this tree.
- 5.12 Apart from the tree cover shown to be removed to provide vehicular access, which is unavoidable to facilitate development of the site, all boundary tree cover is to be retained ensuring the development is in accordance with the specific guidance under the site allocation (HS52). The shading influence of these trees has also been considered and while tree cover along the site's southern boundary will inevitably cast shade over the site, this shading would not be considered excessive and should be considered in accordance with Local Policy GD1.
- 5.13 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 prior to removal by an experienced ecologist.

## Discussion

- 5.14 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 a high proportion of the existing tree cover. The retention of this tree coupled with proposed new tree planting which will include tree lined streets, will meet the individual aspirations set out in these various policies.

## **6.0 NEW TREE AND HEDGEROW PLANTING**

- 6.1 As part of the development proposals an adequate quantity of structured tree planting has been identified within the submitted Landscaping Plan to mitigate for the proposed tree removal. This new tree planting has been identified, alongside the primary access roads, within the roadside verges and within proposed areas of public open space.
- 6.2 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.
- 6.3 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.
- 6.4 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 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 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.

### **Tree Protection Barriers**

- 7.6 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.
- 7.7 In most situations, fencing should comprise typical construction fencing panels attached to scaffold poles driven vertically into the ground, as illustrated in Appendix B.
- 7.8 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**

- 7.9 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.
- 7.10 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.
- 7.11 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.

## 8.0 TREE MANAGEMENT

- 8.1 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.
- 8.2 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).
- 8.3 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.
- 8.4 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 risk<sup>4</sup>.
- 8.5 It is currently expected that a suitably qualified Arboriculturist 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.

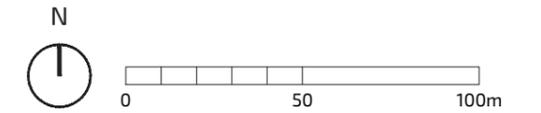
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<sup>4</sup> The Health and Safety at Work Act 1974

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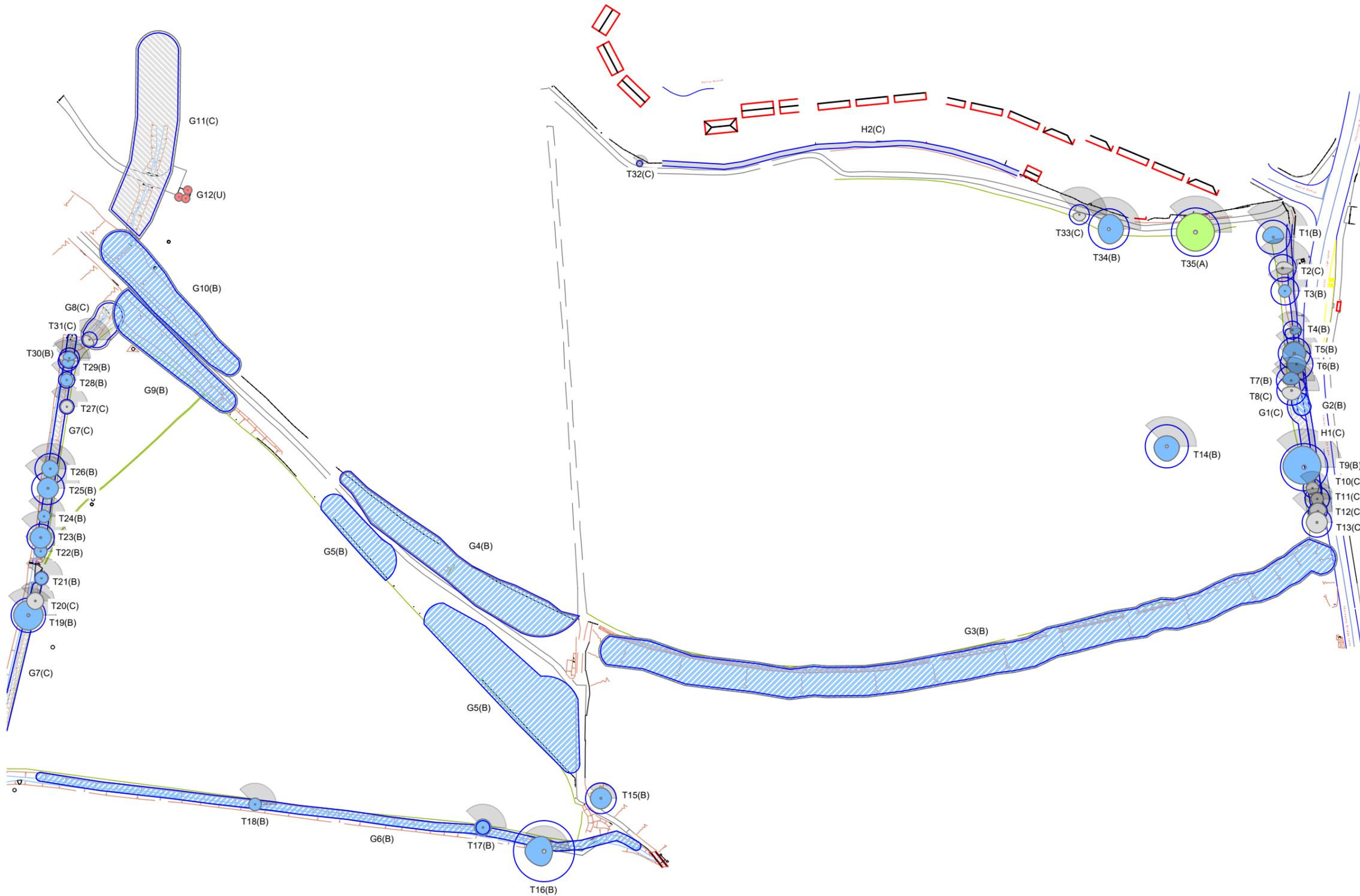
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Company No. 07128076. [T] 01509 672772 [E] [mail@fpcr.co.uk](mailto:mail@fpcr.co.uk) [W] [www.fpcr.co.uk](http://www.fpcr.co.uk)

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-  Category U - Trees / Groups Unsuitable for Retention (BS5837:2012)
-  Category A - Trees / Groups of High Quality (BS5837:2012)
-  Category B - Trees / Groups of Moderate Quality (BS5837:2012)
-  Category C - Trees / Groups of Low Quality (BS5837:2012)
-  Hedgerow  
Colour Indicates BS5837:2012 Category
-  Root Protection Area
-  Individual/Group number and BS5837:2012 Category
-  Indicative Shade Pattern (in accordance with BS5837:2012 where appropriate)

rev	date	description	EC / AW
-	29/01/24	First Issue.	EC / AW
A	01/11/24	Revision	EC / AW

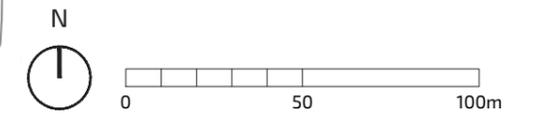
client  
**Avant Homes**  
 project  
**Thurnscoe Bridge Lane,  
 Thurnscoe**

title  
**TREE SURVEY PLAN** scale  
 1:2000 @ A3

number  
**12242-T-01** status rev  
 - A

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**Notes:**

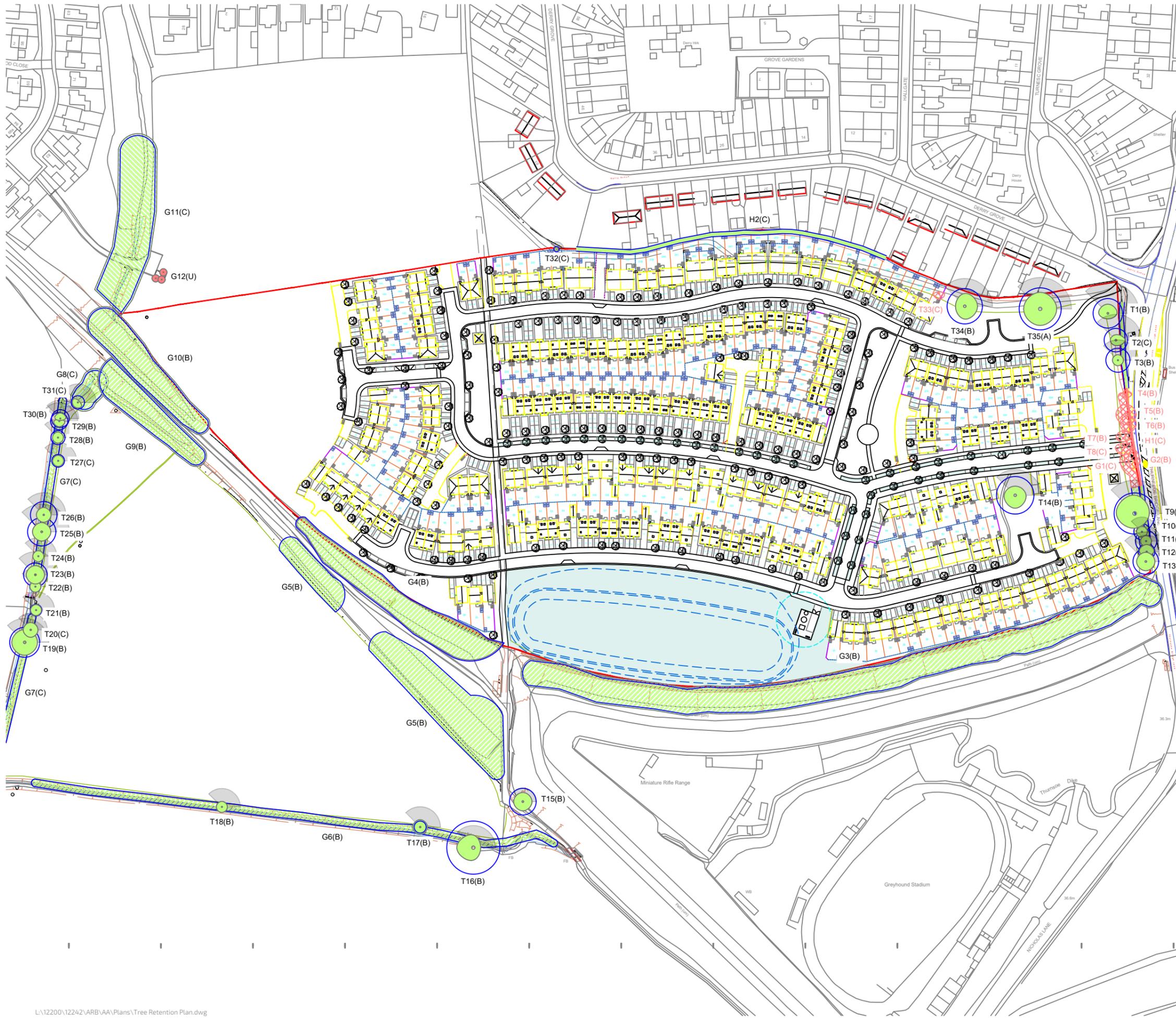
All dimensions to be verified on site. Do not scale this drawing, use figure dimensions only. Drawing to be read in conjunction with Arboricultural Assessment and Appendix A - Tree Schedule. The exact position of individual trees or species included as part of a tree group, woodland or hedgerow should be checked and verified site prior to and decisions for foundation design, tree operations or construction activity being undertaken. Further survey work would be required for calculation foundation depths.

- Tree/Group to be Retained
- Tree/Group proposed to be removed subject to relevant permissions
- Category U - Unsuitable for retention on arboricultural grounds
- Hedgerow Proposed to be Retained and Incorporated into the New Development
- Hedgerow proposed to be removed subject to relevant permissions
- Root Protection Area (Shown for retained trees only)
- Individual / Group Number and BS Category
- Individual / Group Number to be Removed and BS 5837:2012 Category
- Indicative Shade Pattern (in accordance with BS5837:2012 where appropriate)

rev	date	description	EC / AW
A	24/10/24	First Issue.	EC / AW
	01/11/24	Revision	EC / AW
			drwn/chkd

client  
**Avant Homes**  
 project  
**Thurnscoe Bridge Lane, Thurnscoe**

title	scale
<b>TREE RETENTION PLAN</b>	1:2000 @ A3
number 12242-T-02	status -
	rev A



### Appendix A - Tree Schedule

Measurements	Age Classes	Quality Assessment of BS Category	ULE (relates to BS Category)
<b>Height</b> - Measured using a digital laser clinometer (m)	<b>YNG:</b> Establishing, typically with good vigour and fast growth rates and strong apical dominance; c. less than 1/3 life expectancy	<b>Category U</b> - 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
<b>Stem Dia.</b> - Diameter measured (mm) in accordance with Annex C of the BS5837	<b>SM:</b> Semi-mature trees less than 1/3 life expectancy	<b>Category A</b> - Trees of high quality with an estimated remaining life expectancy of at least 40 years.	40+ years
<b>Crown Radius</b> - Measured using a digital laser clinometer radially from the main stem (m)	<b>EM:</b> Established, typically vigorous and increasing in apical height and lateral spread; 1/3 - 2/3 life expectancy. Offers landscape significance	<b>Category B</b> - Trees of moderate quality with an estimated remaining life expectancy of at least 20 years.	20-40 years
<b>Abbreviations</b>  est - Estimated stem diameter avg - Average stem diameter for multiple stems upto - Maximum stem diameter of a group	<b>M:</b> Fully established over 2/3 life expectancy, generally good vigour and achieving full height potential with crown still spreading	<b>Category C</b> - Trees of low quality with an estimated remaining life expectancy of at least 10 years, or young trees with a stem diameter below 150mm.	10-20 years
	<b>OM:</b> 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	
	<b>V:</b> 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.	<b>The BS category particular consideration has been given to the following:</b> <ul style="list-style-type: none"> <li>• The presence of any structural defects in each tree/group and its future life expectancy</li> <li>• The size and form of each tree/group and its suitability within the context of a proposed development</li> <li>• The location of each tree relative to existing site features e.g. its screening value or landscape features</li> <li>• Age class and life expectancy</li> </ul>	

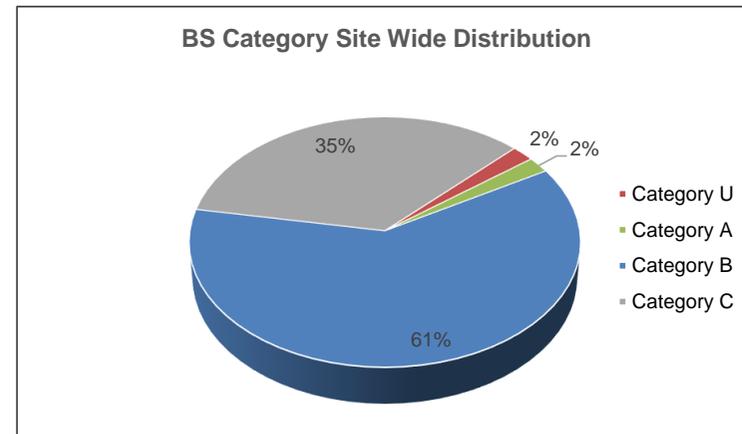
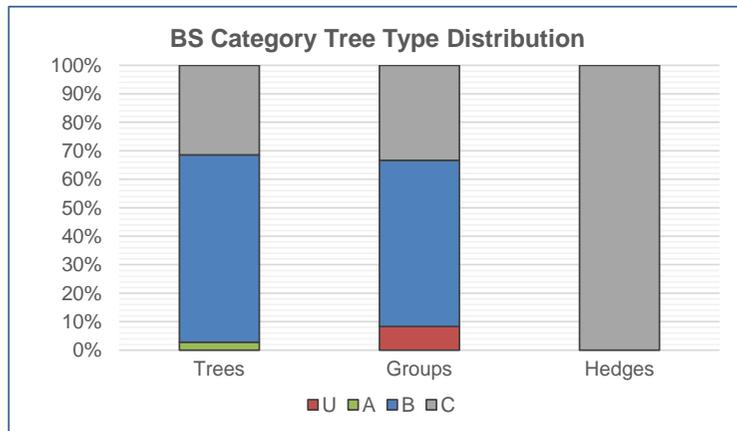
Structural Condition	Physiological Condition	Root Protection Area (RPA)
<b>Good</b> - No significant structural defects	<b>Good</b> - No significant health problems	<ul style="list-style-type: none"> <li>• The RPA Radius column provides the extent of an equivalent circle from the centre of the stem (m).</li> <li>• 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.</li> <li>• Where veteran trees have been identified the RPA has been calculated in accordance with Natural England guidance i.e. 15x the stem diameter, uncapped.</li> </ul>
<b>Fair</b> - Structural defects that can be remediated	<b>Fair</b> - Symptoms of ill-health that can be remediated	
<b>Poor</b> - Significant defects beyond remediation, present a risk of failure in the foreseeable future	<b>Poor</b> - Significant ill-health. Unlikely the tree will recover in the long term	
<b>Dead</b> - Dead tree with structural integrity of tree severely compromised	<b>Advanced Decline / Dead</b> - Advanced state of decline and unlikely to recover or Dead	

### Appendix Summary

	Individual Trees	Totals	Tree Groups and Hedgerows	Totals
Category U		0	G12	1
Category A	T35	1		0
Category B	T1, T3, T4, T5, T6, T7, T9, T14, T15, T16, T17, T18, T19, T21, T22, T23, T24, T25, T26, T28, T29, T30, T34	23	G2, G3, G4, G5, G6, G9, G10	7
Category C	T2, T8, T10, T11, T12, T13, T20, T27, T31, T32, T33	11	G1, G7, G8, G11, H1, H2	6
	<b>Total</b>	<b>35</b>	<b>Total</b>	<b>14</b>

**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
<b>INDIVIDUAL TREES</b>										
T1	Turkey Oak Quercus cerris	17	670	N - 5 S - 3 E - 5 W - 5	M	G	Situated within field parcel uneven crown due to past suppression neighbouring tree removed past pruning to raise crown small diameter dead branches	203	8.0	B (i)
T2	Sycamore Acer pseudoplatanus	14	530	N - 3 S - 3 E - 5 W - 3	M	P	Situated within field parcel basal suckers die back of crown with large diameter dead branches large dead branch to east over footpath and bench epicormic growth noted throughout crown	127	6.4	C (i)
T3	Common Lime Tilia x europaea	11	Over ivy 545	3	M	F	Situated within field parcel dense ivy cover obscures main stem severed at base compact crown epicormic growth noted throughout small diameter dead branches noted	134	6.5	B (i)
T4	Sycamore Acer pseudoplatanus	9	Over ivy 355	N - 2 S - 2 E - 4 W - 1	EM	F	Situated within field parcel part of a linear group along boundary end tree dense ivy cover obscures main stem severed at base epicormic growth noted throughout crown basal suckers	57	4.3	B (ii)
T5	Turkey Oak Quercus cerris	12	Over ivy 630	5.5	M	F	Situated within field parcel part of a linear group along boundary dense ivy cover obscures main stem severed at base broken branches noted in lower crown small diameter dead branches crown weighted to east towards carriageway	180	7.6	B (ii)
T6	Turkey Oak Quercus cerris	11	640	4.5	M	F	Situated within field parcel part of a linear group along boundary established basal sucker base obscured small diameter dead branches past pruning to raise crown with large diameter pruning wound	185	7.7	B (ii)

Tree No	Species	Height	Stem Dia.	Crown Radius	Age Class	Overall Condition	Structural Condition	RPA	RPA Radius	BS5837 Cat
T7	Beech Fagus sylvatica	11	585	N - 4 S - 2 E - 4 W - 4	M	F	Situated within field parcel part of a linear group along boundary uneven crown due to close spacing to neighbouring tree broken branches and branch stubs noted in lower crown	155	7.0	B (ii)
T8	Ash Fraxinus excelsior	13	Over ivy 580	N - 2 S - 4.5 E - 4.5 W - 4.5	M	F	Situated within field parcel part of a linear group along boundary uneven crown due to close spacing to neighbouring tree dense ivy cover obscures stem ash die back evident basal suckers and epicormic growth noted dead branches within crown	152	7.0	C (i)
T9	Turkey Oak Quercus cerris	18	930	N - 10 S - 8 E - 8 W - 10	M	F	Situated within field parcel part of a linear group along boundary large diameter pruning wound on main stem at 1.5m western aspect partially occluded with small cavity spreading form typical of species large diameter dead branches and epicormic growth noted in crown	391	11.2	B (i)
T10	Sycamore Acer pseudoplatanus	8	370	3	EM	P	Situated within field parcel part of a linear group along boundary past pruning to raise crown with branch socket cavities further cavities noted on main stem with exposed heartwood limited future potential	62	4.4	C (i)
T11	Sycamore Acer pseudoplatanus	8	480	3	EM	P	Situated within field parcel part of a linear group along boundary past pruning to raise crown with branch socket cavities limited future potential	104	5.8	C (i)
T12	English Oak Quercus robur	9	320 180	N - 4 S - 2 E - 4 W - 4	EM	F	Situated within field parcel part of a linear group along boundary uneven crown due to suppression from neighbouring tree low crown to near ground level with broken branches noted in lower crown twin stemmed from 1m unlikely to develop into a suitable mature specimen	61	4.4	C (i)

Tree No	Species	Height	Stem Dia.	Crown Radius	Age Class	Overall Condition	Structural Condition	RPA	RPA Radius	BS5837 Cat
T13	Ash Fraxinus excelsior	16	580	5	M	F	Situated within field parcel part of a linear group along boundary end tree in row basal suckers noted with ash die back evident burring noted on main stem close to base possible hollowing crown weighted towards carriageway broken branches and dead branches noted in crown	152	7.0	C (i)
T14	English Oak Quercus robur	14	850	N - 5 S - 7 E - 6 W - 6	M	F	Situated within centre of field parcel close cultivation of soil around base small basal cavity with bracket fungus noted past pruning to raise crown for machine access with branch stubs helical split up main stem partially occluded possible lightening strike large diameter dead branches large patches of missing bark open cavity noted on main leader at 7m sheltered Ganoderma resinaceum Lacquered bracket	327	10.2	B (iii)
T15	Hawthorn Crataegus monogyna	7	350 350 350	5	M	F	Situated beyond site boundary on railway embankment multi stemmed from 1m crossing and rubbing branches noted within crown past pruning to raise crown above adjacent footpath	166	7.3	B (i)
T16	English Oak Quercus robur	12	1200	N - 7 S - 7 E - 4 W - 9	M	P	Situated beyond drainage channel forming site boundary remnant stem hollow from ground level up to crown break at 5m burnt out with fire damage completed hollow with holes through remaining stem two mature lateral branches form crown with some fire damage noted on northern branch and exposed heartwood good physiological condition structurally poor and at risk of failure	651	14.4	B (iii)
T17	English Oak Quercus robur	11	270	4	EM	F	Situated within boundary tree group past pruning to raise crown above site unable to fully access base	33	3.2	B (i)

Tree No	Species	Height	Stem Dia.	Crown Radius	Age Class	Overall Condition	Structural Condition	RPA	RPA Radius	BS5837 Cat
T18	Sycamore Acer pseudoplatanus	10	240	3	EM	F	Situated within boundary tree group lower crown maintained by flail mowing unable to fully access base	26	2.9	B (i)
T19	English Oak Quercus robur	13	680	7	M	F	Situated on site boundary on bank of drainage channel large basal cavity with exposed heartwood and decay pocket noted past pruning to raise crown broken branches noted in lower crown	209	8.2	B (i)
T20	Beech Fagus sylvatica	9	250 200	4	EM	P	Situated on site boundary on bank of drainage channel multi stemmed from 1m with single failed stem at 1.5m bleeding noted on main stem close to base unable to fully access limited future potential	46	3.8	C (i)
T21	Sycamore Acer pseudoplatanus	10	210 160	3	EM	F	Situated within boundary tree group lower crown maintained by flail mowing unable to fully access base	32	3.2	B (i)
T22	Sycamore Acer pseudoplatanus	10	250	3	EM	F	Situated within boundary tree group unable to fully access base	28	3.0	B (i)
T23	Sycamore Acer pseudoplatanus	12.5	535	5	M	F	Situated within boundary tree group unable to fully access base basal suckers restrict access	129	6.4	B (i)
T24	English Oak Quercus robur	10	200	3	EM	F	Situated within boundary tree group unable to fully access base	18	2.4	B (i)
T25	English Oak Quercus robur	15	640	5	M	F	Situated on site boundary on bank of drainage channel basal cavity with exposed heartwood and decay pocket noted past pruning to raise crown broken branches noted in lower crown	185	7.7	B (i)

Tree No	Species	Height	Stem Dia.	Crown Radius	Age Class	Overall Condition	Structural Condition	RPA	RPA Radius	BS5837 Cat
T26	English Oak Quercus robur	12	est 600	4	M	F	Situated on site boundary on bank of drainage channel unable to access base past pruning to raise crown broken branches noted in lower crown	163	7.2	B (i)
T27	Sycamore Acer pseudoplatanus	10	230 120 120	3	EM	F	Situated within boundary tree group unable to fully access base possible lapsed coppice with decay evident in stool	37	3.4	C (i)
T28	Sycamore Acer pseudoplatanus	10	200 200 150	3	EM	F	Situated within boundary tree group unable to fully access base possible lapsed coppice	46	3.8	B (i)
T29	Sycamore Acer pseudoplatanus	10	300 200 150	N - 1 S - 3 E - 3 W - 3	EM	F	Situated within boundary tree group unable to fully access base close spacing to neighbouring tree resulting in uneven crown	69	4.7	B (i)
T30	Sycamore Acer pseudoplatanus	10	400	N - 3 S - 1 E - 3 W - 3	EM	F	Situated within boundary tree group unable to fully access base close spacing to neighbouring tree resulting in uneven crown	72	4.8	B (i)
T31	Sycamore Acer pseudoplatanus	10	300	N - 1 S - 3 E - 3 W - 3	EM	F	Situated within boundary tree group unable to fully access base close spacing to neighbouring tree resulting in uneven crown suppressed crown form	41	3.6	C (i)
T32	Hawthorn Crataegus monogyna	4	6x 50	1	M	P	Self seeded on edge of field parcel next to fence maintained lower crown	7	1.5	C (i)
T33	Sycamore Acer pseudoplatanus	13	6x 160	N - 1 S - 3 E - 3 W - 3	M	P	Situated within field parcel on edge of track stems removed to North to maintain clearance multi stemmed from base possible bundle with multiple trees limited arboricultural value	69	4.7	C (i)

Tree No	Species	Height	Stem Dia.	Crown Radius	Age Class	Overall Condition	Structural Condition	RPA	RPA Radius	BS5837 Cat
T34	Sycamore Acer pseudoplatanus	15	800	N - 7 S - 7 E - 7 W - 5	M	F	Situated within field parcel on edge of track basal suckers restrict access to stem past pruning to raise crown above track	290	9.6	B (i)
T35	Turkey Oak Quercus cerris	17	950	9	M	G	Situated within field parcel on edge of track spreading form typical of species occasional large diameter dead branches crossing and rubbing branches noted in crown past pruning to raise crown above track	408	11.4	A (i)

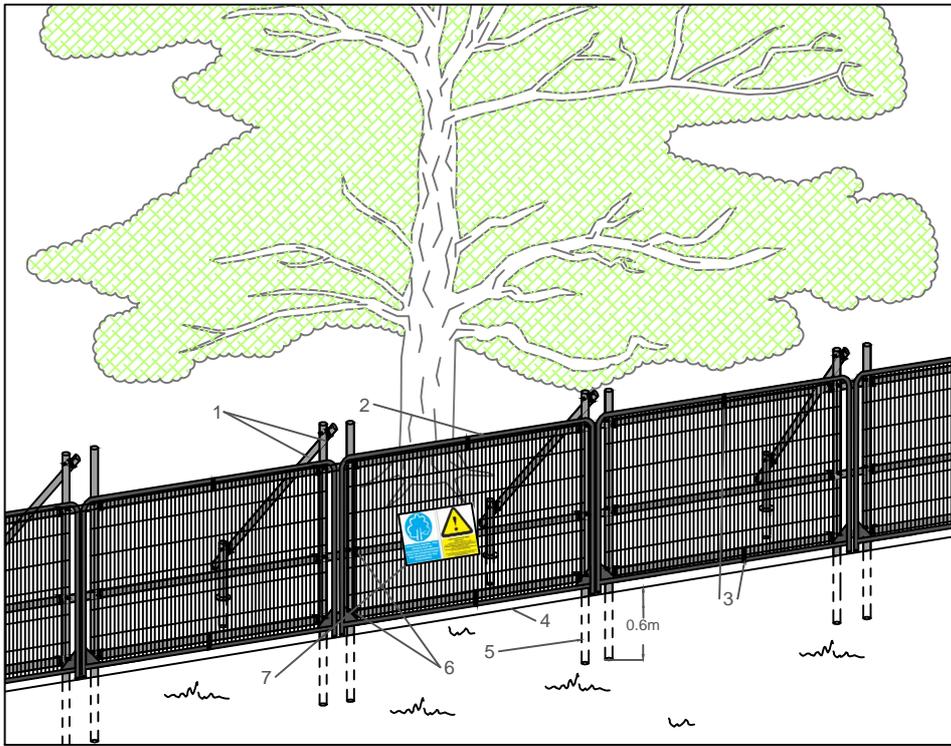
Group No	Species	Height	Stem Dia.	Crown Radius	Age Class	Overall Condition	Structural Condition	RPA	RPA Radius	BS5837 Cat
<b>GROUPS OF TREES</b>										
G1	Ash Fraxinus excelsior English Oak Quercus robur Hawthorn Crataegus monogyna Sycamore Acer pseudoplatanus English Elm Ulmus procera	6	upto 170	2	SM	P	Sporadic self seeded trees along field edge close to boundary forming understorey to mature specimens dense undergrowth throughout group with debris limited arboricultural value	13	2.0	C (ii)
G2	English Elm Ulmus procera	9	upto 350	4	EM	F	Linear group of trees along site boundary seven trees in total likely self seeded with irregular spacing between trees ivy cover obscures base and stems no obvious signs of Dutch elm disease	55	4.2	B (ii)
G3	Ash Fraxinus excelsior English Oak Quercus robur Hawthorn Crataegus monogyna Silver Birch Betula pendula Sycamore Acer pseudoplatanus Turkey Oak Quercus cerris	15	upto 350	5	EM	F	Linear group along former railway embankment no obvious management irregular spacing between trees broken branch and small diameter dead branches noted throughout group lower crowns maintained along field edge moderate screening value	55	4.2	B (ii)

Group No	Species	Height	Stem Dia.	Crown Radius	Age Class	Overall Condition	Structural Condition	RPA	RPA Radius	BS5837 Cat
G4	Ash Fraxinus excelsior Blackthorn Prunus spinosa English Oak Quercus robur Hawthorn Crataegus monogyna Silver Birch Betula pendula Holly Ilex aquifolium Whitebeam Sorbus aria Bird Cherry Prunus padus	11	upto 300	3	EM	F	Linear group along field edge with adjoining footpath likely planted as a buffer dense undergrowth throughout restricts access with occasional cut through sooty bark disease noted within group predominantly ash with blackthorn understorey moderate screening value	41	3.6	B (ii)
G5	Ash Fraxinus excelsior Blackthorn Prunus spinosa English Oak Quercus robur Hawthorn Crataegus monogyna Silver Birch Betula pendula Holly Ilex aquifolium Whitebeam Sorbus aria	10	upto 250	3	EM	F	Linear group along field edge with adjoining footpath likely planted as a buffer dense undergrowth throughout restricts access large gap in centre of group predominantly ash with blackthorn understorey moderate screening value	28	3.0	B (ii)
G6	Hawthorn Crataegus monogyna	8	avg 100 100 100	2	M	F	Outgrown hedgerow along site boundary with drainage channel through group maintained along field edge sparse in sections with gaps moderate landscape value	14	2.1	B (ii)

Group No	Species	Height	Stem Dia.	Crown Radius	Age Class	Overall Condition	Structural Condition	RPA	RPA Radius	BS5837 Cat
G7	Blackthorn Prunus spinosa Crack Willow Salix fragilis Hawthorn Crataegus monogyna Sycamore Acer pseudoplatanus	7	upto 100 100 100	2	SM / M	P	Sporadic trees along site boundary dense undergrowth throughout group sparse in sections with large gaps forms understorey to mature trees in section limited screening value	14	2.1	C (ii)
G8	Crack Willow Salix fragilis	16	upto 400 300	7	M	P	Small group of willow on site boundary close to drainage channel close spacing between trees failed stems noted within group tall upright forms could be coppiced	113	6.0	C (ii)
G9	Elder Sambucus nigra English Oak Quercus robur Sycamore Acer pseudoplatanus Holly Ilex aquifolium	15	upto 350	5	EM	F	Linear group along former railway embankment no obvious management irregular spacing between trees broken branch and small diameter dead branches noted throughout group lower crowns maintained along field edge moderate screening value predominantly sycamore	55	4.2	B (ii)
G10	Elder Sambucus nigra English Oak Quercus robur Hawthorn Crataegus monogyna Sycamore Acer pseudoplatanus	15	upto 350	5	EM	F	Linear group along former railway embankment no obvious management irregular spacing between trees broken branch and small diameter dead branches noted throughout group lower crowns maintained along field edge moderate screening value predominantly sycamore	55	4.2	B (ii)
G11	Crack Willow Salix fragilis Alder Alnus glutinosa	16	upto 400 300	7	M	P	Group of willow on site boundary close to drainage channel close spacing between trees failed stems noted within group tall upright forms predominately willow with occasional alder willow could be coppiced	113	6.0	C (ii)

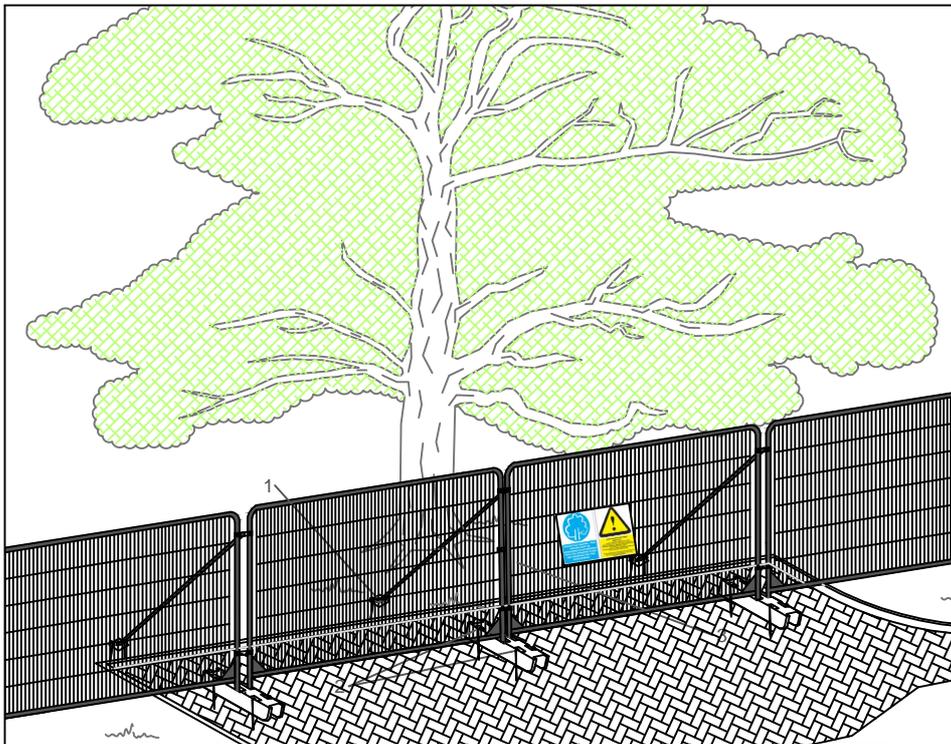
Group No	Species	Height	Stem Dia.	Crown Radius	Age Class	Overall Condition	Structural Condition	RPA	RPA Radius	BS5837 Cat
G12	Crack Willow Salix fragilis Elder Sambucus nigra	6	upto 200	2	M	P	Three trees self seeded around tank previously topped at 1.5m unsuitable for long term retention	N/A	N/A	U

Hedge No	Species	Height	Stem Dia.	Crown Radius	Age Class	Overall Condition	Structural Condition	RPA	RPA Radius	BS5837 Cat
<b>HEDGEROWS</b>										
H1	Hawthorn <i>Crataegus monogyna</i>	1.5	avg 100	0.5	M	P	Gappy hedgerow along site boundary with adjoining carriageway sparse in sections with limited screening value	5	1.2	C (ii)
H2	Elder <i>Sambucus nigra</i> Sycamore <i>Acer pseudoplatanus</i> Holly <i>Ilex aquifolium</i> Privet <i>Ligustrum ovalifolium</i> Leyland Cypress <i>Cupressocyparis leylandii</i> Dogwood <i>Cornus sanguinea</i>	3	est 100	1	EM	P	Scrappy hedgerow along boundary with rear gardens of adjoining properties sparse in sections with gaps	5	1.2	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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drawing title

## APPENDIX B PROTECTIVE FENCING SPECIFICATIONS

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