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ARBORICULTURAL IMPACT ASSESSMENT

Client

Avant Homes

Project

Barugh Green, Barnsley

Date

February 2025

CONTENTS

TABLES

PLANS

APPENDICES

Rev	Issue Status	Prepared/Date	Approved/Date
-	Draft	DB/05/02/25	TEP/05/02/25
-	Final	DB/14/02/25	HR/14/02/25

1.0 INTRODUCTION

1.1 This Arboricultural Impact Assessment has been prepared by FPCR Environment and Design Limited on behalf of Avant Homes to supplement the findings of an Arboricultural Assessment and survey of trees located at Barugh Green, Barnsley (hereafter referred to as the site), OS Grid Ref SE318078.

Site Description

1.2 The site comprises arable land south of the A635 Barugh Green Road. The site is bordered to the west and south by further tracts of arable land, and residential development to the east. Claycliffe Business Park and further residential and commercial conurbation lies opposite the site north of the A635. Tree cover consists of outgrown field boundary hedgerow features, with one isolated tree within the site.

Planning History

1.3 The site is identified within the Adopted Local Plan for Barnsley under Policy MU1 'Land South of Barugh Green Road' for mixed use housing and employment and is afforded significant weight.

Scope of Assessment

1.4 A tree survey and assessment of existing trees was carried out by Quants Environmental on 24th September 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).

1.5 FPCR Environment and Design completed a resurvey using the existing baseline data on 27th January 2025. No adjustments were deemed necessary; a further small area of land at the southern boundary not surveyed in the Quants survey is included in this report and plan.

1.6 This report has been produced to accompany a planning application for residential development, including enhancement to existing drainage.

1.7 The purpose of this report is to provide an assessment of impact arising from the proposed development of the site.

2.0 PLANNING POLICY

National Planning Policy Framework December 2024

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 2024.

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 52), 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 52: unless, in specific cases, there are clear, justifiable, and compelling reasons why this would be inappropriate)*
- *193 (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 70) and a suitable compensation strategy exists'.*
- and provides specific guidance that:
- *193 (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 193 (c), examples of what is deemed to be 'wholly exceptional' are included within Footnote 70 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 HE4 Developments affecting Historic Areas or Landscapes

'Take account of and respect important landscape elements including topographic features or trees that contribute to the significance of the area where harm might prejudice future restoration.'

Policy BIO1 Biodiversity and Geodiversity

'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.'

17.35 Woodlands, Protected Trees and Hedgerows

'17.36 Significant ecological value exists in the borough's Ancient Semi-Natural Woodlands (ASNW) and Plantations on Ancient Woodland Sites (PAWS), and in hedgerows which meet the Hedgerow Regulations criteria and trees covered by a Tree Preservation Order / Conservation Area. Ancient and veteran trees outside of woodland areas would normally be expected to be retained within any development proposals. Allocation as a ASNW/PAWS site does not necessarily rule out any development on these sites, however their special nature needs to be taken into account. If development is felt to be appropriate it could be allowed subject to any adverse impacts on the ecological interests being mitigated'

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 or 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 or 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, or 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.

Considerations and Limitations of the Tree Survey

3.11 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.

3.12 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.

3.13 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.

3.14 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 The Quants Environmental Arboricultural Assessment contains details of all trees, groups, and hedgerows surveyed, and is included in this Impact Assessment as Appendix A for completeness.

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 within Appendix A. 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, RPA and shade pattern (where appropriate) are also indicated on this plan.

FPCR Resurvey Results Summary

4.5 The resurvey confirmed the existing baseline survey data within the redline boundary provided at the time of the initial survey. Comments made on tree condition and retention category remain valid.

4.6 The proposed layout showed a further strip of developed land south of the original southern boundary hedgerow. T22, a Category B offsite silver birch *Betula pendula* was located within a garden and has been shown on the Tree Retention Plan 13153-T-01, together with G8, a small Category C group of hawthorn scrub.

4.7 T22 has an RPA of 3.5m, which encroaches slightly into the site boundary.

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, 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.

4.12 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 5th February 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 Proposed Planning Layout and seeks to outline the relationship between the proposals and the existing trees and hedgerows. The drawing shows the proposals for residential development, access via Barugh Green Road, multiple pedestrian and cycle links, tree lined avenues, several landscaped public open spaces, a play area, and enhanced drainage infrastructure.

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 1 below summarises the impact on tree stock and these impacts have been discussed in more detail following the table.

Table 1: Summary of Impact on Tree Stock

	Trees to be Removed	Reason for Removal	Total
Category U - Unsuitable	T10, T11, T12, G4	Access and drainage enhancements	4
Category A (High Quality / Value)			0
Category B (Moderate Quality / Value	T6, G2, H2, H3, H4, H5 H7 – part removal	Conflict with proposed development and pedestrian/cycle links	7
Category C (Low Quality / Value)	T5, T7, T8, T9, T13, T14, T15, T16, T17, T18, T19, G3, G5, G6, G7, G8 H1 – part removal	Access and drainage enhancements	17

5.5 The proposal requires removal of roadside trees and hedgerow material along Barugh Green Road to allow access, visibility splays, and much needed drainage enhancement. Whilst the total volume may seem high, the material in question is in reality a fragmented and outgrown linear boundary feature of low quality and limited future potential.

5.6 H3, H4, and H5 form a single linear boundary feature, separated by field entrances and small gaps. Their removal is required to facilitate development. Considerable onsite mitigation planting is shown in the proposal, and the loss of this material should not constitute an arboricultural constraint.

Discussion

5.7 Tree and hedgerow removals required to facilitate the proposals are in the main of low-quality Category C material, particularly along the northern boundary adjacent to Barugh Green Road. The proposed access and road realignment allow for safe pedestrian links and vehicle movement into the site, utilising an uncomplicated road layout. The existing drainage ditch associated with the northern boundary is little more than a silted depression that contributed toward water retention in that part of the site, which was notable at the time of the resurvey. The proposed drainage enhancements will alleviate anaerobic waterlogged soil conditions, promoting tree health and longevity for the new planting shown in this area.

5.8 The removal of the internal hedgerow towards the southern site boundary is required to allow reasonable plot positioning, clear sightlines on speed restrained roadways, and appealing garden size and location.

5.9 If drainage enhancements in the northeast corner of the site are likely to affect retained trees as the development planning progresses, supervision of works may be required, and subject to an Arboricultural Method Statement.

5.10 Replacement planting is shown along the northern boundary, together with considerable internal landscaping and tree lined street scene. The proposed removals should not be considered an arboricultural constraint to development.

5.11 Where tree cover can be reasonably retained, it is shown incorporated into landscaped public open space, continuing to support site screening and biodiversity.

5.12 T20, a Category B English oak, is the largest tree on site, and is shown neatly incorporated into the wider landscaped area, providing a focal point along the proposed cycle/footway network linking to the east of the site. The RPA of this tree is considerable and will require no-dig engineering solutions to successfully route the pathway beneath the tree without causing soil compaction and root damage. This tree retained notable features, including deadwood habitat and several potential roost features. It could also be interpreted that the tree had suffered historical crown damage, with the newly formed crown structure developing an asymmetrical habit that extended across the neighbouring road and pedestrian footway. It will be prudent to monitor the health and condition of this tree, both to persevere important ecological features, and to ensure that the tree structure remains safe. Crown reduction is not recommended at this point in time; removal of photosynthetic leaf area (and the relatively light weight of branch end material) should be considered in the short term, so that physiological stress is avoided where possible. Post development, it is recommended that a detailed tree condition assessment is carried out, with a view to producing a schedule of works if deemed necessary. This assessment should also incorporate sonic tomography to help determine the extent of internal decay, which FPCR are able to facilitate.

5.13 Comments made by Quants Environmental regarding hedgerow management and pruning of H7 on the western boundary should remain extant to allow this feature to contribute to the wider developable area.

5.14 The routing of below ground services should consider retained trees and should not encroach within the RPAs of retained trees, as recommended by the guidance given in section 7.7 of BS5837.

5.15 In conclusion for Arboriculture, the proposals are considered to meet the aims and objectives of Barnsley Metropolitan Borough Council policy, and wider national policies, through careful consideration of the design and retention of a high proportion of the existing tree and hedgerow cover.

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 within or close to hard landscaped areas, 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.

6.5 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).

6.6 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.

6.7 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.

6.8 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

6.9 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.

6.10 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

6.11 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.

6.12 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 RPA 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 RPA 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 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 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[1]).

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.

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.

8.6 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.

8.7 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.

[1] Health and Safety at Work etc. Act 1974

N

0 25 50m

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
- 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)
- T1 (A) G1 (A) — Individual / Group Number and BS Category
- T1 (A) G1 (A) — Individual / Group Number to be Removed and BS 5837:2012 Category
- T1 (A) — Individual Number and BS Category Plotted Using Aerial Imagery

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-	05.02.25	First Issue	DB / TEP
A	14.02.25	Revision	DB

client
Avant Homes (Yorkshire)

project
Barugh Green, Barnsley

title
TREE RETENTION PLAN

scale
1:1000 @ A3

number
13153-T-01

status
-

rev
A

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Appendix A

Copy of Quants Environmental Arboricultural Survey

Dated 30th September 2024

Land by Barugh Green Road, Barnsley

Arboricultural Survey

September 2024

Report reference	155-05
Revision	1
Prepared by	Dan Brown (FdSc Arb)
Supervised and approved by	Andrew Westgarth (BSc, MSc, CEnv)
Issue date	30/09/2024

This report is valid for a period of 12 months from the issue date.

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Contents

1 Introduction

1.1.1.1 This report presents the results of an Arboricultural Survey undertaken on the site at Day Nursery, 55 Rodley Ln, Rodley, Calverley, Leeds LS13 1NG. The site is approximately 3.5 ha and is centred on grid reference SE 31812 07854.

1.1.1.2 The Arboricultural Survey has been undertaken to provide supporting information for proposed development of the site.

1.1.1.3 The Arboricultural Survey included a Tree Constraints Survey which was conducted on 24th September 2024 by Dan Brown (FdSc Arb).

Figure 1. Site location and approximate site boundary (Aerial imagery dated 2024)

2 Methodology

2.1.1.1 This Arboricultural survey covers those trees or groups of trees which are considered relevant for the brief. During the survey all relevant individual trees and groups of trees located within and close to the boundary of the site were assessed.

2.1.1.2 The objective of the survey was to collect tree data relevant to the proposed works at the site and to categorise individual trees or tree groups in accordance with BS 5837:2012 'Trees in relation to design, demolition and construction – Recommendations'[1] based on their condition, quality and future potential.

2.1.1.3 The purpose of the categories within BS 5837:2012 is not to determine whether retention of trees is desirable, 'The purpose of the tree categorization method, which should be applied by the arboriculturist, is to identify the quality and value (in a non-fiscal sense) of the existing tree stock, allowing informed decisions to be made concerning which trees should be removed or retained in the event of the development occurring.' (BS 5837:2012, Section 4.5.2). This survey should therefore be regarded as an initial appraisal with observations recorded for trees within and adjacent to the site. Remedial tree works, foundation design and material specification are not covered within this report.

2.1.1.4 The location of the trees is shown within the attached Tree Constraints Plan (TCP) (Appendix 4). A detailed inspection of the trees with respect to decay, defects and hazard is not included. The tree locations are as shown on the topographical drawing supplied.

2.1.1.5 The site survey was conducted on 24th September by Dan Brown (FdSc Arb) in accordance with the BS 5837:2012 methodology[1].

2.1.1.6 Information collected during the survey included species, height, stem diameter, branch spread, height of crown clearance, age class, physiological condition, structural condition, estimated remaining contribution and category grade. The survey was made at ground level using visual assessment of the tree canopy and stem. No removal of vegetation, digging or drilling was undertaken during the survey and parts of the stems of some trees remained partly obscured by vegetation.

2.1.1.7 The TCP in Appendix 4 shows the positions, canopy spreads and Root Protection Areas (RPA) of the trees included within the survey. The RPA's have been calculated in accordance with Section 4.6 of BS 5837:2012. Where significant ground constraints, such as roads, walls, buildings, water bodies are likely to restrict and influence root development, the RPA circles have been adjusted to form a polygon of equivalent area, in order to show the likely rooting area for trees subjected to significant constraints, in accordance with paragraph 4.6.2 of BS5837:2012.

2.1.1.8 When considering the layout of the site and the retention of trees, proposals should generally be kept outside of both the RPA and the canopy spreads. However, it may be possible to encroach into these with access roads, footpaths and parking areas assuming the existing ground levels can be maintained, and the appropriate construction methods are used. No liability can be accepted by Quants Environmental in respect of the trees or for events which happen after the time of the survey.

[1] British Standards Institution (BSI) BS 5837:2012. Trees in relation to design, demolition and construction – Recommendations. Published by BSI Standards Limited 2012. ISBN 978 0 58069917 7.

3 Results

3.1.1.1 The survey results are shown in Appendix 2 (Tree Survey Results – Table 1) and Appendix 3 (Tree Constraints Plan). The trees included within this survey comprise of 21 individual trees, 7 groups of trees and 8 hedgerows.

- 4 individual trees were classified as Category B;
- 14 individual trees were classified as Category C;
- 1 tree group was classified as Category B;
- 5 tree groups were classified as Category C;
- 7 hedgerows were classified as Category B;
- 1 hedgerow was classified as Category C;
- 3 individual trees were classified as Category U; and
- 1 tree group were classified as Category U.

3.1.1.2 The species on site consisted predominantly of hawthorn *Crataegus monogyna*, ash *Fraxinus excelsior*, blackthorn *Prunus spinosa* and oak *Quercus rubra*.

3.1.1.3 The site is currently open grassland used for livestock. The site is surrounded by further grassland to the south and west and is adjacent to Barugh Green Road and Claycliffe Avenue to the north and east. The site is accessed from Barugh Green Road to the northwest corner of the field.

3.1.1.4 A Tree Preservation Order (TPO) check for the site was carried out via the interactive Barnsley Council website on 27th September 2024. No trees were found to have TPOs, and the site is not within a conservation area.

3.1.1.5 The predominant Arboricultural features on the site are the hedgerows along the site boundaries. The hedgerows comprise of predominantly mature hawthorn trees, with understorey of blackthorn and dog rose. Along the north hedgerow are several self-sown trees which comprise predominantly of ash trees which are lapsed coppice trees resulting in interesting forms. With exception to H1, the remaining hedgerows are in good condition, have full canopies and comprise of more species, and so have been classified as Category B due to their landscape and habitat value.

3.1.1.6 T3, T6 and G2 comprise of hawthorn and ash trees along the north boundary hedgerow and have been classified as Category B due to their higher value as opposed to the low value hedgerow.

3.1.1.7 Several trees along the north boundary were found to be in significant decline, or already dead, and were classified as Category U because of this.

3.1.1.8 The predominant tree within the site is T20, a mature oak tree to the east of the site. The tree is displaying a column of decay within the centre of the stem, with the remaining sound wood appearing to have responded with reaction growth around the cavity. The crown is imbalanced, with bias to the east over Claycliffe Avenue. Whilst the tree does have an impaired condition, it has potential to become a veteran tree in future years and has been classified as Category B due to this potential value.

3.1.1.9 T21 is located on an adjacent site, in a garden and comprises of a mature ash stem, which has been topped previously. The tree has responded with some minimal reaction growth. Due to the large stem, it is likely there has been some form of RPA encroachment into the site. T21 has been classified as Category B.

3.1.1.10 All remaining trees and hedgerows have been identified as low quality, and with no significant impact to the site so have therefore been classified as Category C.

4 Conclusions and Recommendations

4.1.1.1 During the survey 21 individual trees, 7 groups of trees and 8 hedgerows were surveyed.

4.1.1.2 The high value tree, tree groups and hedgerows are located along the site borders, which will provide the main constraint for any proposed development.

4.1.1.3 It is recommended that all Category B trees on site are retained where possible, with suitable replacement planting with trees to mitigate the loss of canopy where removal is unavoidable.

4.1.1.4 Category C trees should be retained to allow retention of existing canopy within the site, however, where tree removal is required, it is recommended to preferably remove Category C trees due to being low value. Suitable replacement planting with trees of improved form will likely increase the longevity of the canopy of these trees.

4.1.1.5 All tree works are to be conducted by a qualified arborist and are to be in accordance with BS 3998:2010.

4.1.1.6 All retained trees will require protection of their RPA's and canopies during any development of the site.

4.1.1.7 An Arboricultural Tree Protection Plan and Working Method Statement should be produced prior to works commencing on site. The Arboricultural Tree Protection Plan and Working Method Statement should cover detailed methods for construction and operation within any of the RPAs in order to minimise the potential for adverse effects on these trees, e.g., digging using hand tools and supervision by a suitably qualified arboriculturist, in accordance with BS5837:2012.

4.1.1.8 During supervised work within the RPAs and canopies, if trees are considered to become unsafe e.g., due to unavoidable severance of significant roots, such trees may need to be felled by a qualified tree surgeon. Any such loss of trees should be mitigated where practicable with replacement tree planting on site, to be agreed with the Local Planning Authority. The Arboricultural Tree Protection Plan and Working Method Statement should cover compensation planting as required.

4.1.1.9 Detailed methods for construction and operation should be developed in order to minimise the potential for adverse effects on trees.

4.1.1.10 Where appropriate, all the trees to be retained should be protected with a tree protection fence in line with BS5837:2012 current recommendations.

4.1.1.11 The loss of any trees should be mitigated where practicable with suitable replacement tree planting on site, to be agreed with the Local Planning Authority. Any new landscaping should be maintained to promote longevity.

Appendix 1. Photographs

Photograph 1. Looking across north boundary of the site.

Photograph 2. Looking along site boundary from Barugh Green Road

Photograph 3. Trees in decline along the north boundary.

Photograph 4. G2

Photograph 5. T20

Photograph 6 . Looking towards south boundary of site and H3 – H5.

Photograph 7. H6

Photograph 8. H7 and T21

Appendix 2. Table 1 - Tree Survey Results

Tree / Group ref.no	Species	Height	Crown Spread (m)				Crown clearance	Stem diameter (mm)	Age class	Phys. Condition	Struct. Condition	Comments	Recommendations	ERC	Cat Grade	Radius of Nominal Circle	RPA SqM
			N	E	S	W											
T1	Ash	8	3	3	3	3	3	190	EM	G	G	Stem divides above 1.5m.	Retain or remove as per development plans.	10+	C1	2.3	16.33
T2	Ash	8	3	2	3	3	3	140	EM	G	G	Minor decline in crown	Retain or remove as per development plans.	10+	C1	1.7	8.87
T3	Ash	8	3	5	5	4	3	180	M	G	G	Lapsed coppice along site boundary. Minor decline to east	Retain where possible.	10+	B3	6.5	131.92
T4	Hawthorn	3	2.5	2.5	2.5	2.5	1	130,120	M	G	G	Unable to inspect stem due to undergrowth. Stem divides above 1.5m.	Retain or remove as per development plans.	10+	C1	2.1	14.17
T5	Hawthorn	3	0.5	1	1	1	1	75	M	G	G	Unable to inspect stem due to undergrowth. Stem divides above 1.5m.	Retain or remove as per development plans.	10+	C1	0.9	2.54
T6	Ash	8	4	5	5	4	3	260,180	M	G	G	Stem divides below 1.5m.lapsed hedgerow tree	Retain where possible.	10+	B3	3.8	45.17

Tree / Group ref.no	Species	Height	Crown Spread (m)				Crown clearance	Stem diameter (mm)	Age class	Phys. Condition	Struct. Condition	Comments	Recommendations	ERC	Cat Grade	Radius of Nominal Circle	RPA SqM
			N	E	S	W											
T7	Ash	10	3	4	2	4	3	75,75,120,100	M	F	G	Stem divides below 1.5m.lapsed hedgerow tree. crown in decline	Retain where possible.	10+	C3	2.3	16.16
T8	Ash	10	2	2	2	2	3	75,75,100	M	F	G	Stem divides below 1.5m.lapsed hedgerow tree. crown in decline	Retain or remove as per development plans.	10+	C3	1.8	9.64
T9	Sycamore	10	2.5	2.5	2	2.5	4	200	EM	F	G	Tree within hedgerow	Retain or remove as per development plans	10+	C1	2.4	18.10
T10	Ash	5	2	3	3	3	0	80,80,80,80,100	EM	P	P	Declining. Unable to inspect stem due to undergrowth. Multiple stems below 1.5m.	Remove	<10	U	2.3	16.16
T11	Hawthorn	2	1	1	1	1	0	100	EM	F	P	Small tree in significant decline	Remove	<10	U	1.2	4.52
T12	Hawthorn	2	1	1	1	1	0	100	EM	F	P	Small tree in significant decline	Remove	<10	U	1.2	4.52

Tree / Group ref.no	Species	Height	Crown Spread (m)				Crown clearance	Stem diameter (mm)	Age class	Phys. Condition	Struct. Condition	Comments	Recommendations	ERC	Cat Grade	Radius of Nominal Circle	RPA SqM
			N	E	S	W											
T13	Hawthorn	3	2.5	2.5	2.5	2.5	1	150	M	G	G	Unable to inspect stem due to undergrowth. Stem divides below 1.5m.	Retain or remove as per development plans.	10+	C1	1.8	10.18
T14	Hawthorn	3	2.5	2.5	2.5	2.5	1	150	M	G	G	Unable to inspect stem due to undergrowth. Stem divides below 1.5m.	Retain or remove as per development plans.	10+	C1	1.8	10.18
T15	Hawthorn	3	2.5	2.5	2.5	2.5	1	150	M	G	G	Unable to inspect stem due to undergrowth. Stem divides below 1.5m.	Retain or remove as per development plans.	10+	C1	1.8	10.18
T16	Hawthorn	4	2.5	2.5	2.5	2.5	1	150	M	G	G	Unable to inspect stem due to undergrowth. Stem divides below 1.5m.	Retain or remove as per development plans.	10+	C1	1.8	10.18
T17	Hawthorn	4	2.5	2.5	2.5	2.5	1	150	M	G	G	Unable to inspect stem due to undergrowth. Stem divides below 1.5m.	Retain or remove as per development plans.	10+	C1	1.8	10.18

Tree / Group ref.no	Species	Height	Crown Spread (m)				Crown clearance	Stem diameter (mm)	Age class	Phys. Condition	Struct. Condition	Comments	Recommendations	ERC	Cat Grade	Radius of Nominal Circle	RPA SqM
			N	E	S	W											
T18	Hawthorn	2	3	1	1	1	1	75,75	M	G	G	Leaning North-West. Unable to inspect stem due to undergrowth. Stem divides below 1.5m.	Retain or remove as per development plans.	10+	C1	1.3	5.08
T19	Hawthorn	4	2	2.5	2.5	1.5	1	75	M	G	G	Leaning North-West. Unable to inspect stem due to undergrowth. Stem divides below 1.5m.	Retain or remove as per development plans.	10+	C1	1.8	10.18
T20	Oak	14	7	9	6	6	0	950	M	G	F	Cavity on main stem. Tree adjacent to boundary. has suffered limb failure and significant decay within main stem	Retain where possible	20+	B3	11.4	408.28
T21	Ash	14	1	1	1	1	0	700	M	F	F	Tree has been topped leaving no canopy with some minor reaction growth	Retain where possible	20+	B3	8.4	221.67

Tree / Group ref.no	Species	Height	Crown Spread (m)				Crown clearance	Stem diameter (mm)	Age class	Phys. Condition	Struct. Condition	Comments	Recommendations	ERC	Cat Grade	Radius of Nominal Circle	RPA SqM
			N	E	S	W											
G1	Hawthorn	5	4	4	3	4	0	200,180,100,100,100	SM	G	G	two multistem trees in proximity to each other forming collective canopy	Retain or remove as per development plans.	10+	C1	3.8	46.32
G2	Ash	10	4	5	5	5	0	200,180,160	M	G	G	group of lapsed coppice ash in close proximity	Retain where possible	20+	B2	3.8	44.32
G3	Ash	10	3	3	3	3	3	140	EM	G	G	Line of ash stems alongside hedgerow boundary	Retain or remove as per development plans.	10+	C2	1.7	8.87
G4	Hawthorn	2	1	1	1	1	0	100	EM	F	P	All trees within group in poor condition	Remove	<10	U	1.2	4.52
G5	Ash	8	2	2	2	2	2	170	EM	F	G	Deadwood present in small number of trees within group. Adjacent to boundary.	Retain or remove as per development plans.	10+	C2	2	13.07
G6	Hawthorn	4	2	2	2	2	0	150	M	G	G	Small line of hawthorn shrubs parallel to boundary hedgerow.	Retain or remove as per development plans.	10+	C2	1.8	10.18
G7	Hawthorn, Ash	7	1	1	1	1	0	220	M	G	G	Line of hedging parallel to the boundary hedgerow	Retain or remove as per development plans.	20+	C2	2.6	21.90

Tree / Group ref.no	Species	Height	Crown Spread (m)				Crown clearance	Stem diameter (mm)	Age class	Phys. Condition	Struct. Condition	Comments	Recommendations	ERC	Cat Grade	Radius of Nominal Circle	RPA SqM
			N	E	S	W											
H1	Hawthorn, Ash	7	1	1	1	1	0	100	M	G	G	Boundary hedgerow to north with intermittent gaps between each stem.	Retain or remove as per development plans.	20+	C2	1.2	4.52
H2	Hawthorn, Prunus spinosa (Blackthorn)	7	1	2	5	2	0	100	M	G	G	Hedgerow with thick canopy and good visual screening	Retain where possible	20+	B2	1.2	4.52
H3	Hawthorn	4	3	3	3	3	0	140	M	G	G	Hedgerow with thick canopy and good visual screening	Retain where possible	20+	B2	1.7	8.87
H4	Hawthorn	4	3	3	3	3	0	140	M	G	G	Boundary hedgerow to the south	Retain where possible	20+	B2	1.7	8.87
H5	Hawthorn	4	3	3	3	3	0	100	M	G	G	Boundary hedgerow to the south	Retain where possible	20+	B2	1.2	4.52
H6	Hawthorn	4	2	2	2	2	0	80	M	G	G	Boundary hedgerow to the south	Retain where possible	20+	B2	1	2.90
H7	Hawthorn, Dog rose, Ash	5	3	3	3	3	0	90	M	G	G	Boundary hedgerow to the west, comprising predominantly of hawthorn and self-sown sash	Retain where possible	20+	B2	1.1	3.66

Tree / Group ref.no	Species	Height	Crown Spread (m)				Crown clearance	Stem diameter (mm)	Age class	Phys. Condition	Struct. Condition	Comments	Recommendations	ERC	Cat Grade	Radius of Nominal Circle	RPA SqM
			N	E	S	W											
H8	Hawthorn, Dog rose	4	1	1	1	1	0	90	M	G	G	managed hedgerow along boundary between site and adjacent property.	Retain where possible	20+	B2	1.1	3.66

Key

***** - Denotes estimated measurement where access to tree stems was restricted or not accessible

Tree/ Group Ref No. – tree/group number, to be recorded on tree survey plan where necessary.

Species – common and scientific names where possible.

Height – overall height of tree in metres.

Stem Dia – stem diameter, in millimetres at 1.5m above adjacent ground level (on sloping ground to the taken on the upslope of the tree base) or immediately above the roof flare for multi-stemmed trees.

Branch spread – in meters taken at the four cardinal points to derive an accurate representation of the crown (to be recorded on the tree survey plan where necessary).

Height of cc – height of crown clearance – in meters above adjacent ground level to inform on ground clearance, crown stem ratio and shading.

Age class – young (Y), young mature (YM), middle mature (MM), over mature (OM) and veteran (V).

Physiological condition – e.g. presence of crown decline, disease, discolouration of leaves - good (G), fair (F), poor (P) and dead (D).

Structural condition – e.g. collapsing, the presence of decay and any physical defect - good (G), fair (F), poor (P) and dead (D)

Management recommendations – including further investigations of suspected defects that require more detailed assessment and potential wildlife habitat.

ERC – estimated remaining contribution – in years e.g. less than 10, 10-20, 20-40, more than 40.

Cat grade – category grade – U or A to C, to be recorded in plan on the tree survey plan where possible.

RPA – Root protection area calculated from BS5837:2012 Trees in Relation to Design, Demolition and Construction – Recommendations in sq/m. Where indicated, dimensions of radius of circle or sides of square based around centre point of trunk calculated for design purposes.

Appendix 3. Table 2 - Cascade Chart for the Quality Assessment[2]

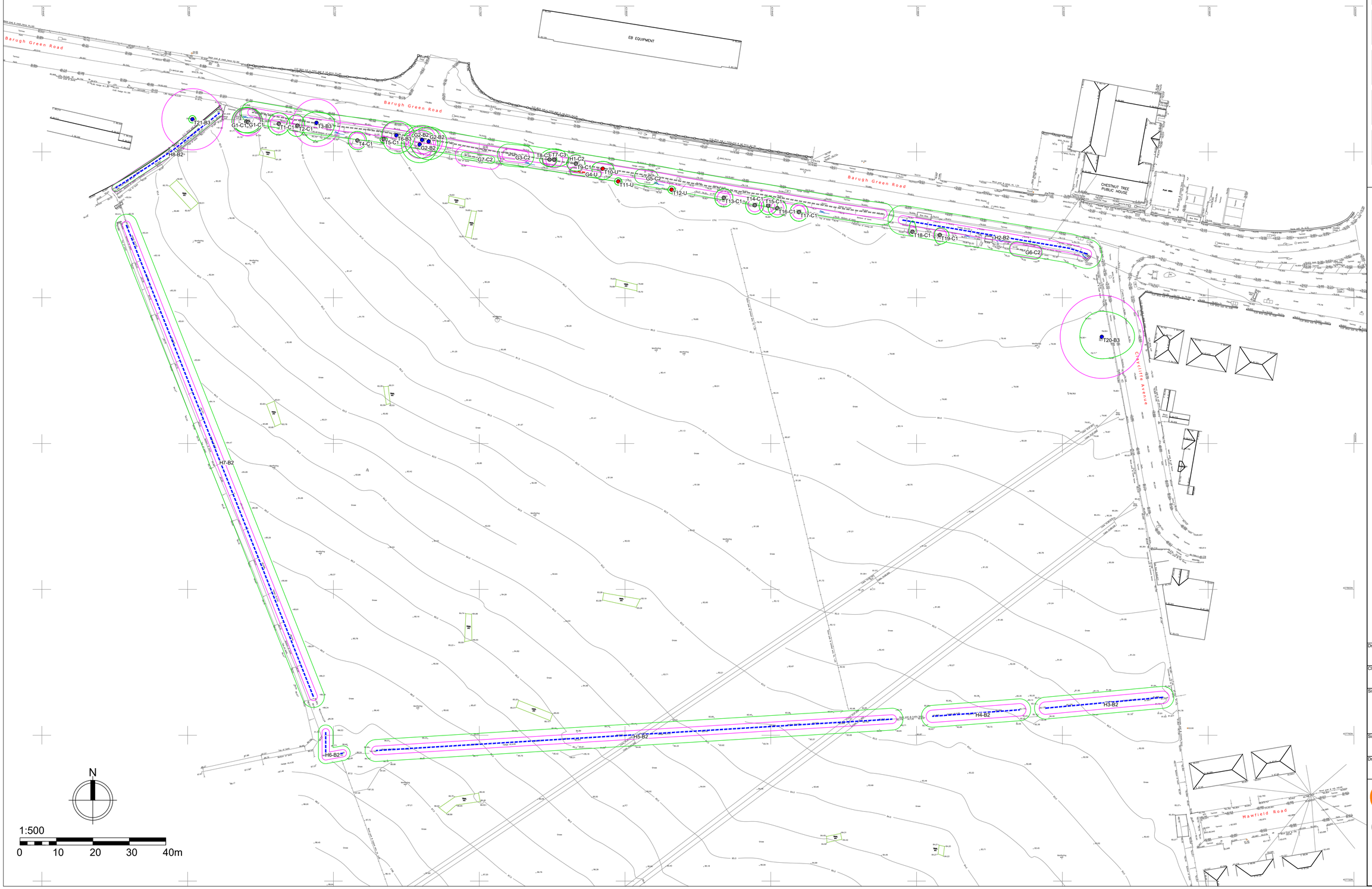
Category and definition	Criteria (including subcategories where appropriate)			Identification on plan
Trees unsuitable for retention				
Category U Those in such a condition that they cannot realistically be retained as living trees in the context of the current land use for longer than 10 years.	Trees that have serious, irremediable, structural defect, such that their early loss is expected due to collapse including those that will become unviable after removal of other category U trees (e.g., where, for whatever reason, the loss of companion shelter cannot be mitigated by pruning). Trees that are dead or are showing signs of significant, immediate, or irreversible overall decline. Trees infected with pathogens of significance to the health and/or safety of other trees nearby, or very low-quality trees supressing adjacent trees of better quality. *Note: Category U trees can have existing or potential conservation value which it might be desirable to preserve.*			See Table 1
	1 Mainly arboricultural qualities	2 Mainly landscape qualities	3 Mainly cultural values, including conservation	
Trees to be considered for retention				
Category A Trees of high quality with an estimated remaining life expectancy of at least 40 years	Trees that are particularly good examples of their species, especially if rare or unusual; or those that are essential components of groups or formal or semi-formal arboricultural features (e.g., the dominant and/or principal trees within an avenue).	Trees, groups or woodlands of particular visual importance as arboricultural and/or landscape features	Trees, groups or woodlands of significant conservation, historical, commemorative or other value (e.g. veteran or trees or wood pasture).	See Table 1
Category B Trees of moderate quality with an estimated remaining life expectancy of at least 20 years	Trees that might be included in Category A, but were downgraded because of impaired condition (e.g., presence of significant though remediable defects, including unsympathetic past management and storm damage), such that they are unlikely to be suitable for retention for beyond 40 years; or trees lacking the special quality necessary to merit the category A designation.	Trees present in numbers, usually growing groups or woodlands, such that they attract a higher collective rating than they might attract as individuals; or trees occurring as collectives but situated so as to make little visual contribution to the wider locality.	Trees with material conservation or other cultural value.	See Table 1
Category C Trees of low quality with an estimated remaining life expectancy of at least 10 years, or young trees with a stem diameter of <150mm.	Unremarkable trees of very limited merit or such impaired condition that they do not qualify in higher categories.	Trees present in groups or woodlands, but without this conferring on them significantly greater collective landscape value; and/or trees offering low or only temporary/transient landscape benefits.	Trees with no material conservation or other cultural value.	See Table 1

[2] The British Standards Institute 2012, Page 9 – Table 1.

Appendix 4. Tree Constraints Plan

Notes

Do not scale off drawing - refer to the tree data schedule for accurate crown spread measurements.
Depictions of tree canopies are based on measurements taken to four cardinal compass points.
No liability of any kind is accepted for any omissions or inaccuracies in respect of this plan.



Key

Trees
Showing Canopy extents, category colour and tag number (with category).

Category A
Trees of high quality with an estimated remaining life expectancy of at least 40 years.

Category B
Trees of moderate quality with an estimated remaining life expectancy of at least 20 years.

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 150 mm.

Category U
Trees in such a condition that they can not realistically be retained as living trees in the context of the current land use for longer than 10 years.

Tree Groups
Shown as dashed centre/boundary line. Colour represents category (see above)

BS 5837:2012 Root Protection Area

Drawing Title
Tree Constraints Plan

Client
Avant Homes

Site/Project
Barugh Green Road
Barnsley

Scale/Sheet	Date		
A1 1-500	30/09/2024		
Drawing No	Rev	Drawn By	Chked By
155 - 05	1	DB	AW

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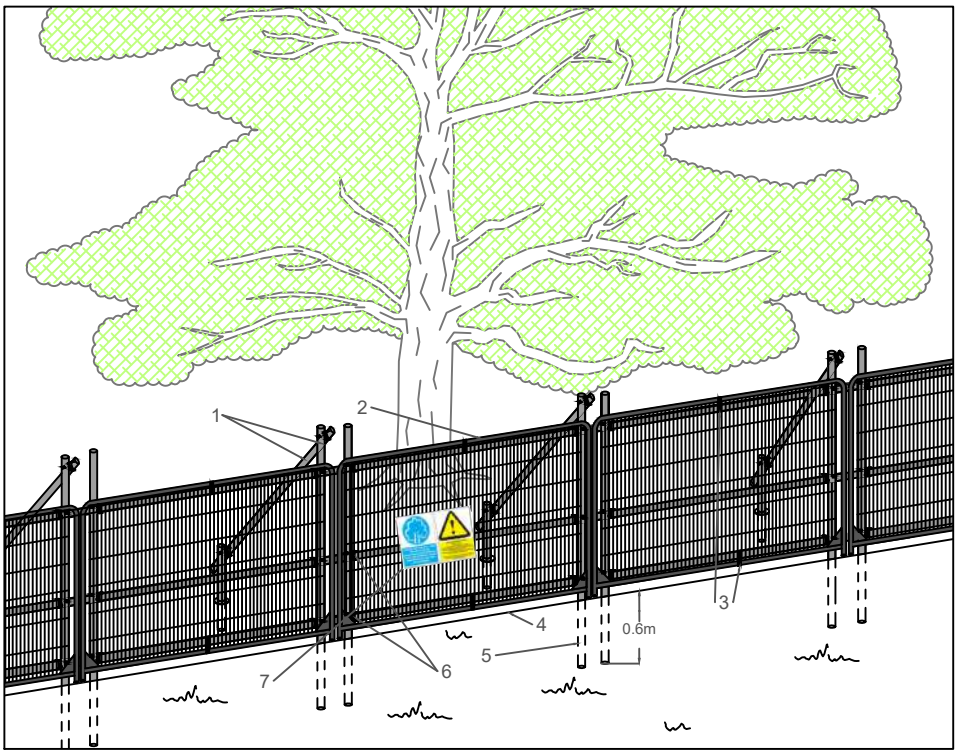
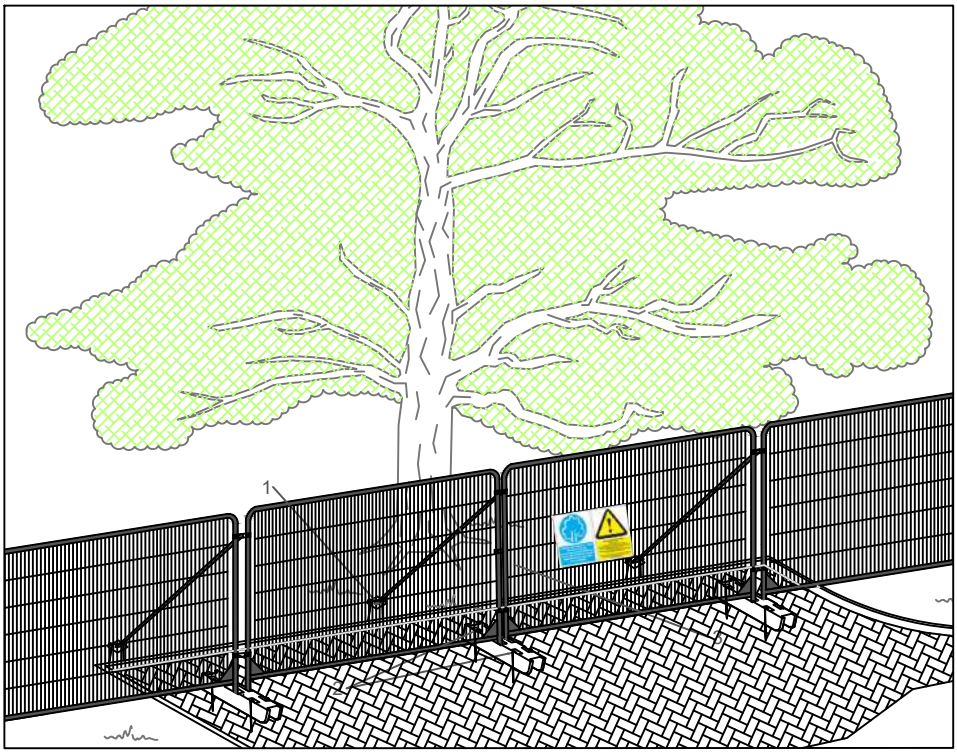


Specification for High Intensity Protection Barrier

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



Specification for Low Intensity Protection Barrier

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

APPENDIX B
PROTECTIVE FENCING SPECIFICATIONS

FPCR | environment & design

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