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British Standard 5837: 2012 – Trees in Relation to Design, Demolition and Construction – Stage One & Two Report:

Tree Schedule Tree Constraints Plan Arboricultural Impact Assessment

November 2020

**Taxal Edge,
Macclesfield Road,
Whaley Bridge,
Derbyshire,
SK23 7DR**

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1. INTRODUCTION

1.1 Terms of Instruction

- 1.1.1 Thompson Tree Services were commissioned by Mr Gary Cullen of Treville Properties Ltd., to undertake a tree survey and report in accordance with BS5837: 2012 guidelines.
- 1.1.2 This report is compiled as an aid to inform the planning process for the proposed development on the site of Taxal Edge, Whaley Bridge, Derbyshire.
- 1.1.3 The instruction is to undertake a ground level visual survey of all the trees on site and on adjoining land that are within influencing distance of the proposed development, in order to assess the mutual impact between them and the development.
- 1.1.4 The instruction is to fulfil the requirements of High Peak Borough Council who require the following arboricultural components in order to validate the planning application:
- a. **Tree Schedule (TS)** to present data from the survey. Included in this report.
 - b. **Tree Constraints Plan (TCP)** for the site including tree retention categories, root protection areas and canopy spreads. Included in this report.
 - c. **Arboricultural Impact Assessment (AIA)** to assess the impact the proposed development will have on the trees on site. Included in this report.
 - d. **Tree Protection Plan (TPP)** in order that the retained trees are adequately protected and that any detrimental impacts are minimised. To be included in stage three report.
 - e. **Arboricultural Method Statement (AMS)** to detail methods and construction design within the RPA and the crown extents of retained trees. To be included in stage three report.
- 1.1.5 It is recognised that additional arboricultural input may be required following a review of the planning application and depending on the finalised layout and design of the proposed development.

1.2 Information Provided

- 1.2.1 A desktop study was undertaken, involving review of all relevant documents pertaining to previous and current planning applications which are available on the planning portal of High Peak Borough Council. A list and summary of the key documents is given in 'Key Findings from Desk Study' (5.2).
- 1.2.2 A topographical plan of the site was provided. This has been used as a base plan for this survey. A plan of the proposed development was also provided.
- 1.2.3 I have previously undertaken a tree condition survey of selected trees on site (dated 27th February 2020 and updated 19th June 2020). The focus of these assessments was on the mature beech throughout the site. This provides a degree of continuity that has aided in the compilation of this report.

1.3 Proposed Development

- 1.3.1 The proposed development involves the demolition of building known as 'Taxal Edge' and adjacent garage, and the construction of seven dwellings and two garages for residential use.

1.4 Site Visits

- 1.4.1 I visited the above site on 21st October 2020. I met with Gary and Samantha Cullen who showed me around the site and provided a brief explanation of the layout and design of the proposed development.
- 1.4.2 Access to the site was unlimited. The weather conditions were overcast but dry. The deciduous trees were just starting the process of annual leaf abscission. I do not consider that the conditions compromised my assessment in any way.

1.5 Site Description

- 1.5.1 The site is situated just to the south west of the town of Whaley Bridge, Derbyshire. This site predominantly slopes down to the east. It is immediately surrounded by residential properties below and to the east, and by a small woodland block above and to the north and west. The site is more exposed to winds from the east, with the topography and mature trees offering some degree of shelter from other directions.
- 1.5.2 The vast majority of trees included in this report lie within the designated area of the proposed development, others included are just beyond the boundary wall to the south of the site, and those beyond the access track to the north west of the site.

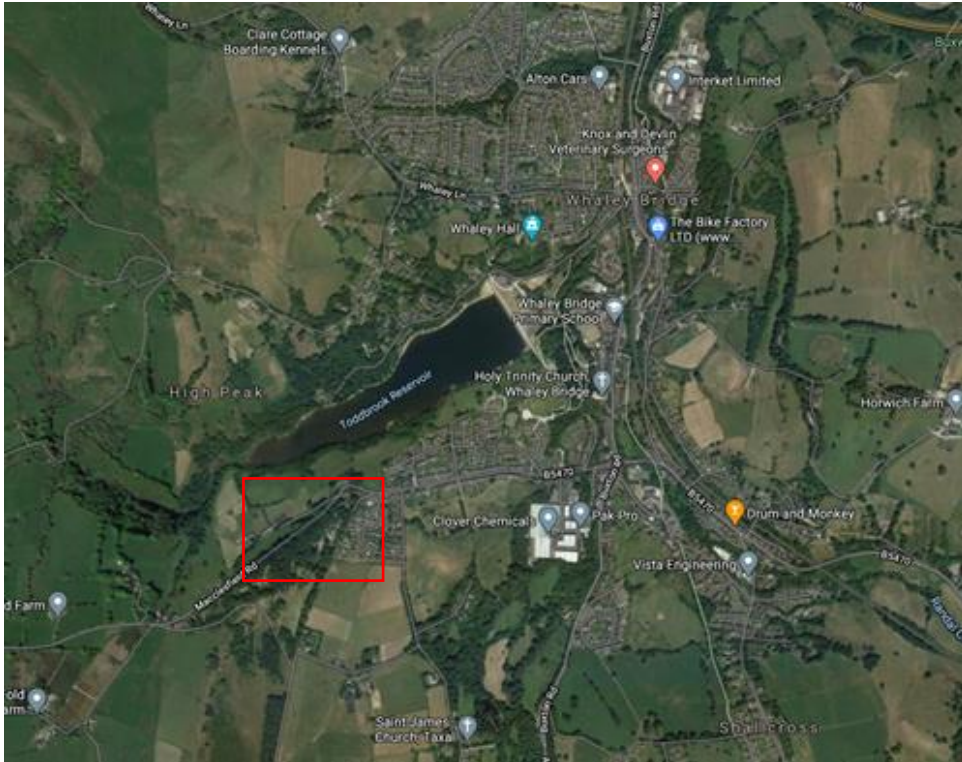


Figure 1 – Aerial photograph of the site. Image courtesy of Google.



Figure 2 – Expanded view of the site. Note red line does not represent site boundary. Image courtesy of Google.

1.6 British Standard 5837 (2012) – An Iterative Process

1.6.1 British Standard (BS5837:2012) gives guidance on the principles and processes that should be applied in order to achieve a satisfactory juxtaposition of trees and structures. Considered design can deliver enhanced landscapes and minimise potential conflict.

1.6.2 The process should involve discussions with all parties at the earliest opportunity to ensure that the trees appropriate for retention are integrated into the final design to best enhance the proposed development.

1.6.3 Stage 1 – Identify & categorise trees

This is required for most planning applications where there are trees on or adjacent to your site. It shall include the following components:

- i. Initial Tree Survey to produce a Tree Schedule (TS) to identify & categorise all trees that may be impacted by a proposal
- ii. Initial Tree Constraints Plan (TCP) which should be used to inform the layout of the proposed development

1.6.4 Stage 2 – Protect and mitigate

This is usually required following a stage 1 survey. Components required will depend on details of the proposed development and if there is a requirement to carry out work within Root Protection Areas (RPAs) or within crown extents of retained trees. It may include the following components:

- iii. Arboricultural Impact Assessment (AIA) to include suggested mitigation for any tree removals.
- iv. Tree Protection Plan (TPP) – Outline
- v. Arboricultural Method Statement (AMS) – Heads of Terms

1.6.5 Stage 3 – Discharge of conditions

This is sometimes required following a stage 2 report. This is typically only required if there is a planning condition or reserved matters requirement to do so. Components required may include:

- vi. Tree Protection Plan (TPP) – Dimensioned
- vii. Arboricultural Method Statement (AMS) – Finalised
- viii. Arboricultural Supervision and Site Monitoring Schedule

1.6.6 Stage 4 – Arboricultural supervision & post-construction

This is sometimes required following a stage 3 report. This is typically only required if there is a requirement to carry out work within Root Protection Areas. A project arboriculturist should be appointed to oversee the development. It involves:

- ix. Arboricultural Supervision and Site Monitoring
- x. Evidence of reinstatement, planting and aftercare protocols

2. LIMITATIONS & SCOPE OF REPORT

- 2.1 The information, opinions and recommendations contained within this report are based on my site observations and provided information, interpreted in the context of my arboricultural knowledge & experience (as detailed in section 11).
- 2.2 This survey has been carried out from ground level only. No climbing inspection or detailed investigation of decay has been made. If it is deemed that such an inspection would be helpful or necessary, this is to be included in the recommendations.
- 2.3 This survey is intended to inform of constraints posed by the trees currently present on site. Any assessment of tree condition is to be regarded as preliminary in nature. If a more thorough assessment is required then a tree condition inspection should be undertaken.
- 2.4 The survey was restricted where trees were located wholly or partially on neighbouring land or where ivy, basal growth or other vegetation obscured lower stems and root collars.
- 2.5 This report outlines the trees' condition as observed on the day of the survey, and so offers a snapshot of the trees at this time. Trees are living organic structures whose condition can change rapidly.
- 2.6 The trees included in this report have been assessed within their current and proposed context and surrounding land use. If this context changes beyond the proposed development described in this report, then it is recommended that a reassessment is carried out. Examples include land use change affecting the target, or adjacent tree / building work modifying wind flow patterns.
- 2.7 Due to the unpredictable laws and forces of nature, and a natural failure rate of intact trees, no tree should ever be considered absolutely safe from failure.
- 2.8 No below ground assessment or excavation has been attempted, nor has any effort been made to assess subsidence / heave risk potential, or direct damage caused by roots. It is recommended that a soil assessment is undertaken to inform decisions relating to any operations, including foundation design, in proximity to retained trees.
- 2.9 It is recognised that additional arboricultural input may be required following a review of the planning application and depending on the finalised layout and design of the proposed development.

3. REGULATORY FRAMEWORK AND LEGAL STATUS

- 3.1 The Local Planning Authority (LPA) has not been contacted to establish if the trees are covered by a Tree Preservation Order (TPO) or are within a Conservation Area (CA). (*Town and Country Planning Act 1990 – amended 2008 & 2012*)
- 3.2 According to the Derbyshire County Council mapping portal, the vast majority of the site has statutory protection in the form of an area TPO (175). As such an application must be made to the LPA prior to any works taking place.
- 3.2 I understand that High Peak Borough Council have also recently placed an area TPO on the site, however this has not yet been confirmed.
- 3.4 A felling licence (*Forestry Act 1967*) may be required to implement proposed tree works, depending on volume of timber to be felled.
- 3.5 There is an overriding exception for the above statutory controls for work deemed necessary to implement development that has received full planning permission. This is not the case if only outline planning permission has been received.
- 3.6 A wildlife and biosecurity assessment should be undertaken by the tree work contractor and findings used to inform how and when any works are to be carried out.

4. SURVEY METHODOLOGY

- 4.1 The tree survey has been carried out in accordance with British Standard 5837: 2012 Trees in relation to Design, Demolition and Construction.
- 4.2 The tree survey was carried out from ground level and in accordance with the Visual Tree Assessment (VTA) method (Mattheck 2007).
- 4.3 Use of a sounding mallet, binoculars, and a probe has been made where appropriate. Should a more detailed inspection be required then this will be highlighted in the recommendations.
- 4.4 Pear Technology is used for the collection, analysis, and presentation of data. Both Ordnance Survey and the provided topographical plan have been used to produce the Tree Schedule and associated plans.
- 4.5 Trees with a stem diameter <75mm were not surveyed due to the ease of replacement or relocation.

4.6 The following information was collected for each tree or group of trees:

- i. Reference number
- ii. Species – common & botanical names
- iii. Height
- iv. Stem diameter – measured at 1.5 m above ground level
- v. Crown spread – recorded in the four cardinal points
- vi. Height of lowest branch – at the four cardinal points
- vii. Age / maturity – as described in glossary
- viii. Structural condition – as described in glossary
- ix. Physiological condition – as described in glossary
- x. Each tree was individually assessed and notes recorded regarding the condition of each tree's roots, main stem and crown
- xi. Estimated remaining contribution based upon an assessment of the tree's potential safe useful life expectancy (SULE) – as described in glossary
- xii. Retention categories are assigned:
 - **A Category** Trees of high quality and value in such a condition as to be able to make a substantial contribution for a minimum of 40 years.
 - **B Category** Trees of moderate quality and value in such a condition as to make a significant contribution for a minimum of 20 years.
 - **C Category** Trees of low quality and value currently in adequate condition to remain until new planting could be established and expected to remain for a minimum of 10 years, or young trees with a stem diameter less than 150mm measured at 1.5 meters above ground level.
 - **U Category** Trees in such a condition that any existing value would be lost within 10 years and which should, in the current context, be removed for reasons of sound arboricultural or forestry management.
- xiii. General observations on the tree's condition
- xiv. Preliminary management recommendations

5. OBSERVATIONS & ANALYSIS

5.1 General Observations & Site Appraisal

- 5.1.1 The mature tree-scape of the grounds contributes significantly to the arboricultural amenity and wildlife value of the site and beyond.
- 5.1.2 Of particular note the mature beech trees within and immediately adjacent the site boundary, are highly visible and form a strong landscape feature. The value of these trees is reflected in their retention categories.
- 5.1.3 The age structure of the trees within the grounds is dominated by mature trees, with few semi-mature or young trees. There are therefore few successors to the mature trees and the sustainability of the current tree population appears poor.
- 5.1.4 Throughout the grounds there is evidence of historic and recent removal of semi-mature and mature trees. This will inevitably have modified the wind flow patterns around the site to some extent.
- 5.1.5 According to the British Geological Survey maps, the site appears to be on a bedrock of sandstone. Observations on site also suggest that this is the case.

5.2 Key Findings from Desk Study

- 5.2.1 List of Key Documents in chronological order:

Document	Author	Company	Date
Habitat Survey Report	Ewa Tomalak	NLG Ecological	April 2020
Draft Landscape Planting	Venessa Swift	The Plant Room	May 2020
Consultation Response	Monica Gillespie	High Peak Borough Council	September 2020
Consultation Response	Libby Duggan-Jones	Derbyshire Wildlife Trust	September 2020
Consultation Response	Andy Stubbs	Natural England	October 2020

- 5.2.2 The Habitat Survey Report (April 2020) states that “To compensate for loss of woodland habitats Treville Properties are undertaking tree planting of 1500 whips of ... [mixed UK native species] ... along the boundaries of the woodland to provide woodland edge habitat ... In addition, a detailed woodland management plan is currently being developed by NLG Ecology on behalf of Treville Properties for the area indicated...” As the area is outside of the site boundary, it is understood that this will form part of a Section 106 agreement.

- 5.2.3 The Consultation Response from Derbyshire Wildlife Trust (September 2020) sets out a requirement for further details of the Woodland Management Plan “Woodland Management Plan shall be submitted to the LPA for approval, in accordance with details in paragraph 4.1.19 of the Ecological Appraisal (NLG Ecology Ltd, 2020). The approved scheme shall be implemented in full in perpetuity.”
- 5.2.4 The Consultation Response from High Peak Borough Council Arboricultural Officer (September 2020) correctly states that the Tree Condition Report (Thompson Tree Services, 2020) does not provide the information required by BS5837:2012 Trees in Relation to Design, Demolition and Construction. It should be noted that the Terms of Instruction for the Tree Condition Report were not related to the proposed development and the report was not intended for use in any such planning application. The consultation response also suggests that the Draft Landscape Planting Plan (May 2020) does not provide sufficient mitigation for the anticipated impact of the proposed development on existing trees on site. I have since been provided with an amended Landscape Planting Plan.
- 5.2.5 The Consultation Response from Natural England (October 2020) advised “no objection” to the proposed development from the perspective of potential impact on the nearby Peak District National Park and Toddbrook Reservoir Site of Special Scientific Interest.

5.2 Tree Schedule

- 5.2.1 A summary of my findings are outlined below. The complete data set and comments resulting from the survey are presented in full in the Tree Schedule (appendix 1).
- 5.2.2 The location of each individual tree, group of trees and their associated constraints are shown on the Tree Constraints Plan (appendix 2).
- 5.2.3 **Category A trees:** My survey identified six trees which I consider to be worthy of retention category A and of particularly high arboricultural value. Not all of these trees are within the site boundary but do form constraints with potential to impact on the proposed development. It should be noted that this categorisation should be considered provisional due to the apparent reduced physiological condition of several of the mature beech trees. It is not yet clear if this should be attributed to short-term stress (most likely drought stress), or long-term decline perhaps associated with infection by pathogens.
- 5.2.4 **Category B trees:** There are also four category B trees or groups of trees within potential influencing distance of the proposed development.
- 5.2.5 **Category C trees:** There are further seventeen category C trees or groups of trees within influencing distance of the proposed development. I consider these trees to be of poor quality.
- 5.2.6 **Category U trees:** There are no category U trees on site.

6. TREE CONSTRAINTS

6.1 Tree Constraints Plan (TCP)

6.1.1 The Tree Constraints Plan (TCP) is a scale drawing showing both above and below ground constraints imposed by all trees within influencing distance of the proposed development. Each tree or group of trees is shown on the plan with corresponding reference number, species (common name), retention category, Root Protection Area (RPA), crown spread and shading arc (appendix 2).

6.2 Above Ground Constraints

6.2.1 Direct impact, future growth, shading, window orientation and leaf fall are generally considered to be the most significant long term above ground constraints in terms of design layout of proposed development adjacent to trees. These should be fully considered when deciding on the layout of the site, which should avoid future pressure for the removal of retained trees.

6.2.2 Any development should not rely on or demand repeated future pruning to avoid damage or nuisance caused by adjacent trees.

6.3 Below Ground Constraints

6.3.1 The Root Protection Area (RPA) is an area around a tree in which no ground works may be undertaken without due care in relation to the retained tree(s). Measures must be taken to avoid soil compaction, root severance, changes in levels or soil contamination which could reduce tree health and/or stability.

6.3.2 The default position should be that structures are to be located outside the RPA of retained trees. However, where there is an overriding justification for construction within the RPA, technical solutions might be available.

6.3.3 The default RPA is plotted as a circle centred on the base of the main stem, with the area requiring protection calculated based on the tree's stem diameter. This is shown on the Initial Tree Constraints Plan (appendix 2). The shape and exact location of the RPA may be modified depending upon arboricultural considerations relating to existing ground conditions.

6.3.4 Design of built structures should consider risk of future damage due to direct root damage, and of indirect damage if shrinkable clay soils are present.

6.4 Impact on the Proposed Development

- 6.4.1 I understand that the layout of the proposed development has undergone several iterations in order that it is best integrated to the landscape. The tree constraints have been respected and designed around in order to enable retention of the higher quality trees as their arboricultural value and potential contribution to the development has been recognised.
- 6.4.2 **Category A trees:** The proposed development has been designed around the constraints of category A trees such that all such trees shall be retained with minimal impact.
- 6.4.3 **Category B trees:** These trees are to be retained and their constraints fully considered in the layout and design of the proposed development.
- 6.4.4 **Category C trees:** I consider that the category C trees on site should not be considered a constraint to development. Therefore, their removal should be considered acceptable, on the condition that appropriate mitigation measures are specified and implemented.

7. ARBORICULTURAL IMPACT ASSESMENT (AIA)

7.1 The Arboricultural Impact Assessment is made to take account of the effects of any loss of trees, and of potential damage to retained trees.

7.2 Trees Identified for Removal

7.2.3 In order to facilitate the proposed development it is anticipated that there will be a requirement to remove the following individual trees and groups of trees. These are shown on the Tree Removal and Retention Plan (appendix 3).

- Sycamores T14, T15, T16, T17 – immediately adjacent plots 1 & 2
- Ash T21 – to the north west of plot 6
- Individual trees within Group 3 – immediately to the east of the access drive
- Group 22 – immediately to the west of plots 6 & 7

Although these trees clearly make a contribution to the canopy cover of the site, I suggest that no trees are of particular individual value. As such I consider that these trees should not be considered a constraint to development, on the understanding that there is potential for appropriate mitigation measures to improve the overall arboricultural value of the site.

7.3 Tree Pruning

7.3.1 Preliminary recommendations have been made for minor pruning of several trees. These recommendations are general in nature, and not specific to the proposed development.

7.3.2 Additional facilitation pruning may be required dependant on plant that is to be used throughout site. If this is the case, further consultation with the project arboriculturist and LPA will be required.

7.4 Potential Conflict within RPAs & Crown Extents

7.4.1 Given the nature of the site and the development, there is inevitably a requirement for some degree of encroachment into the RPAs and crown extents of retained trees in order to facilitate and accommodate the proposed development.

7.4.2 Methods and engineering solutions intended to minimise the impact of construction activity in proximity to retained trees shall be employed. These are detailed in the Arboricultural Method Statement (AMS) and Construction Method Statement (CMS).

7.4.3 It should be noted that in addition to the trees identified in this survey, there are many other trees throughout the category ranges that are not within direct influencing distance of the proposed development. The preliminary pruning recommendations combined with the Tree Protection Plan intends to protect all trees on site from reasonably foreseeable risk of damage associated with anticipated construction traffic and operations.

7.5 New Planting

- 7.5.1 As trees are to be removed in order to facilitate the proposed development, High Peak Borough Council are to be consulted on their policy for tree replacement. It is strongly recommended that as a minimum, any trees which are to be lost should be replaced by high quality trees as part of the overall landscaping proposals for the site at a minimum ratio of 1:1.
- 7.5.2 A comprehensive Landscape and Planting Plan has been developed by Vanessa Swift of The Plant Room. This appears to be well considered to include appropriate species in the appropriate locations and so follows the principle of 'right tree right place'. A revision and amendment to the draft plan has addressed the comments of the High Peak Borough Tree Officer, Monica Gillespie, by including more large tree species with greater life expectancies, and a greater species diversity from an increased range of families. I understand that the proposed new planting to form a hedgerow along the track to the west of site will form part of a Section 106 Agreement.
- 7.5.3 I consider that as there is adequate space for planting of large landscape species, as well as more formal planting of small and medium trees, there is potential to provide more than adequate mitigation for any short-term reduction in canopy cover.
- 7.5.4 In addition to planting within the site boundary, I understand that extensive planting within the woodland and woodland edge is proposed.
- 7.5.5 It is recognised that details of new planting and aftercare requirements may be finalised in reserved matters / planning conditions / planning agreements.

7.6 Woodland Management

- 7.6.1 In addition to new planting throughout the site, I consider that there is significant long-term value in developing and implementing a woodland management plan. I suggest that a management regime has potential to provide overall net benefit to the site as a whole as the condition, resilience and sustainability of the woodland and the overall local tree population can be improved.
- 7.6.2 The Habitat Survey Report (April 2020) states that "To compensate for loss of woodland habitats Treville Properties are undertaking tree planting of 1500 whips of ... [mixed UK native species] ... along the boundaries of the woodland to provide woodland edge habitat ... In addition, a detailed woodland management plan is currently being developed by NLG Ecology on behalf of Treville Properties for the area indicated..." I am not aware of the details of the woodland management plan as it is not currently available for review.
- 7.6.3 It is recognised that details of the woodland management plan may be finalised in reserved matters / planning conditions / planning agreements.

8. CONCLUSIONS

8.1 I consider that the site of Taxal Edge contains a fine tree population which contributes greatly to the site's amenity and wildlife values.

8.2 Retention and protection of the highest quality trees have been prioritised in consideration of the layout and design of the proposed development.

8.3 Overall Impact of the Proposed Development

8.3.1 I consider the overall impact of the proposed development on the tree population of the development site and wider local environment is minor.

8.3.2 I suggest that with the extent of scope for the combined approach of well-considered replacement planting, and the development of a woodland management plan, the development can be viewed as an opportunity to enhance the arboricultural value of the area, the resilience and sustainability of its tree population and to provide net benefit in the long-term.

8.3.3 I consider that provided that the demolition and construction is carried out in accordance with the recommendations detailed within this report, the Arboricultural Method Statement, and the Construction Method Statement, then there is no arboricultural reason as to why the proposal cannot be implemented.

9. RECOMMENDATIONS

- 9.1 I have made preliminary recommendations regarding management of the trees present on site. These have been made in the interest of sustainable arboricultural management and are not directly related to the proposed development. My recommendations are presented in full in the Tree Schedule (appendix 1).
- 9.2 Trees Recommended for Retention:** I recommend that the Tree Protection Plan (TPP) and Arboricultural Method Statement (AMS) are fully implemented to minimise impact on retained trees.
- 9.2.1 I have recommended that the mature beech trees to be retained on site are subject to an annual formal inspection and regular informal checks regarding any changes in their condition and presence of annual fungal fruiting bodies.
- 9.3 Trees Recommended for Pruning:** My preliminary recommendations include light pruning of the individual trees and selected trees within groups identified below (see Tree Schedule for specifications):
- Sycamore (T2)
 - Beech (T4, T13, T24, T26, T27)
 - Oak (T18)
 - Willow (T19)
- 9.4 Trees Recommended for Removal:** I recommend that individual trees and selected trees within groups identified below are removed and replaced. These are shown on the Tree Removal and Retention Plan (appendix 3).
- Sycamores T14, T15, T16, T17 – immediately adjacent plots 1 & 2
 - Ash T21 – to the north west of plot 6
 - Individual Trees within Group 3 – immediately to the east of the access drive
 - Group 22 – immediately to the west of plots 6 & 7
- 9.5 Tree Planting and Woodland Management:** I recommend that details of the landscape planting plan and the woodland management plan are finalised in reserved matters / planning conditions / planning agreements.
- 9.6 Additional Recommendations**
- 9.6.1 I recommend that a project arboriculturist is appointed to oversee the development.
- 9.6.2 In addition to the trees identified in this report, there are many other fine trees within the curtilage of the site. If there is a requirement for any operation or plant movement relating to the proposed development to take place beyond the area covered by this report, then I recommend that the project arboriculturist should be consulted.

- 9.6.3 Should any facilitation pruning be required beyond the scope of this report then due processes are to be followed. See Regulatory Framework (section 3).
- 9.6.4 Any tree work must be carried out in line with British Standard 3998:2010 Tree Work – Recommendations.
- 9.6.5 Any tree planting must be carried out in line with British Standard 8545:2014 ‘Trees: from nursery to independence in the landscape – Recommendations’.
- 9.6.6 It is strongly recommended that an Arboricultural Association Approved Contractor is used to carry out any tree work. A list of these is available from the Arboricultural Association.

9.7 Recommended delivery of arboricultural input to the planning system

Planning application to include;


- Tree Schedule – produced from initial tree survey
- Tree Constraints Plan – showing RPAs, crown spreads, and shading
- Tree retention & removal plan
- Strategic hard and soft landscape design
- Arboricultural Impact Assessment
- Tree Protection Plan
- Arboricultural Method Statement – heads of terms

Planning conditions / reserved matters may include;

- Tree Protection Plan – detailed
- Arboricultural Method Statement – detailed
- Schedule of works to retained trees
- Detailed hard and soft landscape design including full details of new planting and woodland management
- Arboricultural site monitoring schedule

10. DISCLAIMER

Reports remain the copyright of Thompson Tree Services (Midlands) Ltd and any transfer to a third party must be with our express consent.



2nd November 2020

Mike Kiss

DATE

11. QUALIFICATIONS & EXPERIENCE

11.1 Experience

- 2008 – 2020 Twelve years' experience in the Arboricultural industry as a climbing arborist and team leader, all of which have been for Arboricultural Association Approved Contractors.
- 2011 – 2020 Nine years' (occasional) experience carrying out a range of tree surveys for both Arboricultural Association Approved Contractors and Bristol City Council.
- 2011 – 2013 Two years' experience as an Arboricultural Officer (Parks) for Bristol City Council.

11.2 Qualifications

- 2010 Professional Tree Inspection – Lantra / Arboricultural Association
- 2009 Technicians Certificate – Tree Life Training
- 2001 BSc (Hons) Geography – The University of Sheffield

11.3 Continuing Professional Development

- 2019 Further study undertaken with Tree Life Training with the intention of qualifying with Level 6 Award in Arboriculture in 2021
- 2019 Valuing and Managing Veteran Trees – an Advanced Course – Ancient Tree Forum / VETree
- 2018 Quantified Tree Risk Assessment (QTRA)
- 2017 Professional Tree Inspection refresher – Arboricultural Association

11.4 Memberships

- The Arboricultural Association – Technician Member
- The Arboricultural Association – Approved Contractor

12. BIBLIOGRAPHY & REFERENCES

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www.barrelltreecare.co.uk/resources/technical-guidance
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- National Joint Utilities Group '*Guidelines for the Planning, Installation and Maintenance of Utility Services in Proximity to Trees*' (NJUG 10, Volume 4, 2007)
- Watson, G. (2013) '*Tree Pests and Diseases – An Arborists' Field Guide*'.
- Watson, G. & Green, T. (2011) '*Fungi on Trees – An Arborists' Field Guide*'.

13. GLOSSARY OF TERMS

Abiotic - Pertaining to non-living agents; e.g. environmental factors

Absorptive roots - Non-woody, short-lived roots, generally having a diameter of less than one millimetre, the primary function of which is uptake of water and nutrients

Access facilitation pruning - One off tree pruning operation, the nature and effects of which are without significant adverse impact on tree physiology or amenity value, which is directly necessary to provide access for operations on site

Age class

- **Newly Planted**
- **Young** – a tree in the first third of its life expectancy
- **Early Mature** – a tree in the second third of life expectancy
- **Mature** – a tree in the final third of its life expectancy
- **Over Mature** – a tree exceeding its usual life expectancy

Arboricultural Method Statement - Methodology for the implementation of any aspect of development that is within the root protection area, or has the potential to result in loss of or damage to a tree to be retained

Arboriculturist - Person who has, through relevant education, training and experience, gained expertise in the field of trees in relation to construction

Architecture - In a tree, a term describing the pattern of branching of the crown or root system

Arisings - parts of the tree that has been removed for disposal, branches, leaves, roots etc.

Bacteria - Microscopic single-celled organisms, many species of which break down dead organic matter, and some of which cause diseases in other organisms

Bark - A term usually applied to all the tissues of a woody plant lying outside the vascular cambium, thus including the phloem, cortex and periderm; occasionally applied only to the periderm or the

phellem

Bifurcates - a division of the main stem into two main scaffolds.

Buttress zone - The region at the base of a tree where the major lateral roots join the stem, with buttress-like formations on the upper side of the junctions

Categorisation of Trees (BS5837 2012):

- **Category A** – Trees of high quality with an estimated remaining life expectancy of at least 40 years
- **Category B** – Trees of moderate 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 of young trees
- **Category U** – Trees in such a condition that they cannot realistically be retained as living trees in the context of the current land use for longer than 10 years
- **Criteria 1** – mainly arboricultural qualities
- **Criteria 2** – mainly landscape qualities
- **Criteria 3** – mainly cultural values, including conservation

Cavity - a hole in the woody structure of the tree; often caused through decay.

Condition – either structural or physiological;

- **Good** – containing no apparent significant defects or pathogens.
- **Fair** – containing defects or pathogens that have potential to have an impact on the function of the tree, or component of the tree.
- **Poor** – containing defects or pathogens that cause dysfunction to the tree, or component of the tree.

Construction - Site based operations with the potential to affect existing trees

Construction exclusion zone - Area based on the Root Protection Area from which access is prohibited for the duration of the project

Crown/Canopy - The main foliage bearing section of the tree

Crown lifting - The removal of limbs and small branches to a specified height above ground level

Crown reduction - A specified reduction in crown size whilst preserving, as far as possible, the natural tree shape

Deadwood - Branch or stem wood bearing no live tissues. Retention of deadwood provides valuable habitat for a wide range of species and seldom represents a threat to the health of the tree.

Removal of deadwood can result in the ingress of decay to otherwise sound tissues and climbing operations to access deadwood can cause significant damage to a tree. Removal of deadwood is generally recommended only where it represents an unacceptable level of hazard

Decay - the progressive decomposition of wood caused by fungi or bacteria which consume it as a food source.

Defect - In relation to tree hazards, any feature of a tree which detracts from the uniform distribution of mechanical stress, or which makes the tree mechanically unsuited to its environment

Dieback - The death of parts of a woody plant, starting at distal ends of the tree

Disease - A malfunction in or destruction of tissues within a living organism, usually excluding mechanical damage; in trees, usually caused by pathogenic micro-organisms

Dysfunction - In woody tissues, the loss of physiological function, especially water conduction, in sapwood

Engineer-designed hard surfacing - Hard surfacing constructed within the 'Root protection area' of a tree, which will be designed by a structural or geotechnical; engineer in collaboration with an

arboriculturist as set out in clause 7.4 of British Standard BS5837:2012. The purpose being to minimise the effects of the construction on the health of the tree.

Felling licence - In the UK, a permit to fell trees in excess of a stipulated number of stems or volume of timber

Fungal Fruiting Body - the reproductive body of a wood decaying fungal pathogen.

Included bark (ingrown bark) - Bark of adjacent parts of a tree (usually forks, acutely joined branches or basal flutes) which is in face-to-face contact

Infection - The establishment of a parasitic micro-organism in the tissues of a tree or other organism

Minor deadwood - Deadwood of a diameter less than 25mm and or unlikely to cause significant harm or damage upon impact with a target beneath the tree

Mycelium - The body of a fungus, consisting of branched filaments (hyphae)

Occlusion - The process whereby a wound is progressively closed by the formation of new wood and bark around it

Pathogen - A micro-organism which causes disease in another organism

Pruning - The removal or cutting back of twigs or branches, sometimes applied to twigs or small branches only, but often used to describe most activities involving the cutting of trees or shrubs

Pruning wound - a wound created through the process of pruning. British Standard 3998 (2010) describes natural target pruning to minimise chance of ingress by pathogens.

Root protection area (RPA) - Layout design tool indicating a national minimum area around a tree deemed to contain sufficient roots and rooting volume to maintain the tree's viability and where the protection of the roots and soil structure is treated as a priority

Safe Useful Life Expectancy (SULE) Estimated useful remaining life expectancy

- <10 years
- 10 – 20 years
- 20 – 40 years
- >40 years

Scaffold - the framework of large diameter stems from the main stem to the crown.

Secondary branch - A branch, generally having a basal diameter of less than 0.25 x stem diameter

Service - Any above- or below-ground structure or apparatus required for utility provision e.g. drainage, gas supplies, ground source heat pumps, CCTV and satellite communications

Stabilise – to prune fragile deadwood such that some of it is retained for its ecological value, but that its risk of failure is reduced.

Squirrel damage - Stripping of the bark from stems or branches by squirrels. This can result in the death of branches or even entire trees

Stem/s - Principle above-ground structural component(s) of a tree that supports its branches

Stress - In plant physiology, a condition under which one or more physiological functions are not operating within their optimum range, for example due to lack of water, inadequate nutrition or extremes of temperature

Structural roots - Roots, generally having a diameter greater than ten millimetres, and contributing significantly to the structural support and stability of the tree

Structure - Manufactured object, such as a building, carriageway, path, wall, service run, and built or excavated earthwork

Subsidence - In relation to soil or structures resting in or on soil, a sinking due to shrinkage when certain types of clay soil dry out, sometimes due to extraction of moisture by tree roots

Targets - In tree risk assessment persons, property or other things of value which might be harmed

by mechanical failure of the tree

Tree Protection Plan - Scale drawing, informed by descriptive text where necessary, based upon the finalised proposals, showing trees for retention and illustrating the tree and landscape protection measures

Understorey - This layer consists of younger individuals of the dominant trees, together with smaller trees and shrubs which are adapted to grow under lower light conditions

Visual Tree Assessment (VTA) - as described by Mattheck, C (2007).

Vitality - A measure of physiological condition. N = within normal range for species and age, R = reduced from the normal range for the species and age, P = poor

Wind exposure - The degree to which a tree or other object is exposed to wind, both in terms of duration and velocity

14. PHOTOGRAPHS



Mixed Group (G3)



Beech (T4)



Beech (T13)



Sycamores (T14 – T17)



Ash (T21)



Mixed Group (G22)



Beech (T26)



Beech (T27)

BS5837:2012 Tree Survey

TTS (Midlands) Ltd

Client: Cullen, G
 Project: Taxal Edge BS5837 v2
 Survey Date: 23/10/2020
 Surveyor: Mike Kiss

Ashleigh House
 Cromford Road
 Wirksworth
 Derbyshire
 DE44FR
 Phone: 01629824079

Tree and Tag No Species	Hght (m)	Stems		Crown		Age	RP A (m ²) R (m)	Phys Condition	Structural Condition	Preliminary Recommendations Survey Comment	Cat ERC		
		No	Ø (mm)	Spread (m)	Clear (m)								
G3													
A Group --	0	1					A: 0 R: 0	Fair	C: S: B:	See Comment :: Unspecified Vaguely linear, fragmented, mixed species group of young trees located on both sides of boundary wall to the east of the site. Species comprise beech, holly, rowan, birch, alder, ash and sycamore, with undergrowth of mostly bramble. Several trees have been previously 'topped' at 4m to 6m. Ash trees are exhibiting advanced infection of Chalara ash dieback (Hymenoscyphus fraxineus). Recommend remove stems within the site boundary and replace with linear planting of trees with the intention of managing as a hedge. See Arboricultural Impact Assessment.	C.2 10 to 20 yrs		
G5													
A Group --	0	1					A: 0 R: 0	Good	C: S: B:	No action :: Unspecified Linear group of young holly located along north eastern boundary of the site. Previously 'topped' at 2m, top of regrowth currently approximatley 4m. Forms effective screening between properties.	B.2 20 to 40 yrs		
Age Classifications:	N	Newly planted	EM	Early Mature				Condition:	C	Crown	Stems:	Ø	Diameter
	Y	Young	M	Mature					S	Stem		(Eq)	Equivalent stem diameter using BS5837:2012 definition
	SM	Semi-mature	OM	Over Mature					B	Basal area	ERC:		Estimated Remaining Contributio

Tree and Tag No Species	Hght (m)	Stems		Crown		Age	RP A (m ²) R (m)	Phys Condition	Structural Condition	Preliminary Recommendations		Cat ERC	
		No	Ø (mm)	Spread (m)	Clear (m)					Survey Comment			
G22													
A Group --	0	1					A: 0 R: 0	Fair	C: S: B:	No action :: Unspecified		C.2 20 to 40 yrs	
G25													
A Group --	0	1					A: 0 R: 0	Good	C: S: B:	No action :: Unspecified		B.2 20 to 40 yrs	
T1													
Sycamore <i>Acer pseudoplatanus</i>	14	4	600 (Eq)	N	4	3	SM	A: 163.1 R: 7.2	Good	C: Good S: Fair B: Fair	No action :: Unspecified	C.2 20 to 40 yrs	
Age Classifications:		N	Newly planted	EM	Early Mature	Condition:		C	Crown	Stems:		Ø	Diameter
		Y	Young	M	Mature			S	Stem			(Eq)	Equivalent stem diameter using BS5837:2012 definition
		SM	Semi-mature	OM	Over Mature			B	Basal area	ERC:			Estimated Remaining Contributio

Tree and Tag No Species	Hght (m)	Stems		Crown		Age	RP A (m ²) R (m)	Phys Condition	Structural Condition	Preliminary Recommendations Survey Comment	Cat ERC	
		No	Ø (mm)	Spread (m)	Clear (m)							
T2												
Sycamore <i>Acer pseudoplatanus</i>	16	1	680	N	4	6	M	A: 209.2 R: 8.16	Good	C: Fair S: Fair B: Fair	See Comment :: Unspecified Located immediately east of entrance to driveway, to the north east of site. Located on shallow raised bank between drive and footpath with associated constraints to rooting area. Minor root girdling. Multiple historic pruning wounds back to main stem, mostly well occluded. Bifcates at 2m with tight fork between co-dominant stems and early onset of included bark to the east. Squirrel damage evident in crown but not fully assessed from ground level. Minor deadwood throughout crown. Minor leaf infection by tar spot (<i>Rhytisma acerinum</i>). Recommend crown lift to clear 5m over drive and 4m elsewhere.	C.2 20 to 40 yrs
T4												
Common Beech <i>Fagus sylvatica</i>	24	1	930	N	7	2	M	A: 391.3 R: 11.16	Fair	C: Fair S: Fair B: Fair	See Comment :: Unspecified Located immediately west of entrance to driveway, to the north east of the site. Fine mature tree. Retaining wall within 3m of main stem. Historic construction of driveway within rooting area. Annual fungal fruiting body at base of main stem, to the north east. Fruiting body in poor condition, heavily discoloured and degraded making accurate identification not possible (see photos). Possibly <i>Armillaria</i> species, but unlikely <i>Armillaria mellea</i> due to lack of ring on stipe. Main stem bifcates at 8m, with open union. Minor deadwood throughout crown. Some apparent reduction in physiological condition, minor crooking of shoot tips. Recommend annual formal inspection and regular informal checks regarding condition and presence of fresh fungal fruiting bodies. Recommend clear surrounding vegetaion within 1m of main stem to facilitate future inspections of base of main stem.	A.1.2 20 to 40 yrs
T6												
Sycamore <i>Acer pseudoplatanus</i>	14	2	439 (Eq)	N	3	6	SM	A: 87.1 R: 5.26	Fair	C: Poor S: Fair B: Fair	No action :: Unspecified Located immediately west of boundary wall to the north of site. Twin-stemmed with tight fork and early onset included bark between co-dominant stems. Multiple historic pruning wounds back to main stem resulted in high crown. Minor deadwood throughout crown. Minor leaf infection by tar spot (<i>Rhytisma acerinum</i>).	C.2 10 to 20 yrs
Age Classifications:	N	Newly planted	EM	Early Mature	Condition:		C	Crown	Stems:		Ø	Diameter
	Y	Young	M	Mature			S	Stem			(Eq)	Equivalent stem diameter using BS5837:2012 definition
	SM	Semi-mature	OM	Over Mature			B	Basal area	ERC:			Estimated Remaining Contributio

Tree and Tag No Species	Hght (m)	Stems		Crown		Age	RP A (m ²) R (m)	Phys Condition	Structural Condition	Preliminary Recommendations		Cat ERC
		No	Ø (mm)	Spread (m)	Clear (m)					Survey Comment		
T7												
Sycamore <i>Acer pseudoplatanus</i>	14	2	492 (Eq)	N	3	5	SM	A: 109.5 R: 5.9	Fair	C: Poor S: Fair B: Fair	No action :: Unspecified Located immediately west of boundary wall to the north of site. Twin-stemmed with tight fork between co-dominant stems. Minor deadwood throughout crown. Minor leaf infection by tar spot (<i>Rhytisma acerinum</i>). Extensive squirrel damage throughout crown.	C.2 10 to 20 yrs
T8												
Sycamore <i>Acer pseudoplatanus</i>	16	3	645 (Eq)	N	5	5	M	A: 188.4 R: 7.74	Good	C: Fair S: Fair B: Fair	No action :: Unspecified Located immediately west of boundary wall to the north of site. Triple-stemmed with tight forks between co-dominant stems. Minor deadwood throughout crown. Minor leaf infection by tar spot (<i>Rhytisma acerinum</i>).	B.2 20 to 40 yrs
T9												
Sycamore <i>Acer pseudoplatanus</i>	12	1	240	N	3	4	Y	A: 26.1 R: 2.88	Good	C: Good S: Good B: Fair	No action :: Unspecified Located immediately east of boundary wall to the north of site. Minor deadwood throughout crown. Minor leaf infection by tar spot (<i>Rhytisma acerinum</i>).	C.2 20 to 40 yrs
T10												
Sycamore <i>Acer pseudoplatanus</i>	14	1	370	N	4	4	SM	A: 61.9 R: 4.43	Fair	C: Poor S: Fair B: Fair	No action :: Unspecified Located within treed area to north east of existing garage. Extensive squirrel damage throughout. Major and minor deadwood throughout crown.	C.2 10 to 20 yrs
T11												
Common Holly <i>Ilex aquifolium</i>	12	2	336 (Eq)	N	2	2	SM	A: 51.1 R: 4.03	Fair	C: Good S: Fair B: Fair	No action :: Unspecified Located immediately west of entrance to driveway, to the north east of site. Retaining wall within 1m of main stem. Twin-stemmed tree with tight fork and included bark.	C.2 20 to 40 yrs
Age Classifications:	N	Newly planted	EM	Early Mature	Condition:			C	Crown	Stems:	Ø	Diameter
	Y	Young	M	Mature				S	Stem		(Eq)	Equivalent stem diameter using BS5837:2012 definition
	SM	Semi-mature	OM	Over Mature				B	Basal area	ERC:		Estimated Remaining Contributio

Tree and Tag No Species	Hght (m)	Stems		Crown		Age	RP A (m ²) R (m)	Phys Condition	Structural Condition	Preliminary Recommendations Survey Comment	Cat ERC	
		No	Ø (mm)	Spread (m)	Clear (m)							
T12												
Sycamore <i>Acer pseudoplatanus</i>	14	1	270	N	3	5	Y	A: 33 R: 3.24	Fair	C: Poor S: Fair B: Fair	No action :: Unspecified Located within treed area to north east of existing garage. Heavily suppressed by adjacent beech. Extensive squirrel damage throughout. Minor deadwood throughout crown.	C.2 10 to 20 yrs
T13												
Common Beech <i>Fagus sylvatica</i>	25	1	1070	N	6	6	M	A: 518 R: 12.84	Fair	C: Fair S: Fair B: Fair	See Comment :: Unspecified Located within treed area to north east of existing garage and immediately west of driveway. Fine mature tree. Retaining wall within 3m of main stem. Historic construction of driveway within rooting area. Main stem trifurcates at 8m. Main stem slight lean to the west. Minor deadwood throughout crown. Apparent reduction in physiological condition, crooking of shoot tips of upper crown. Lower and inner crown, however, appears full and with good vitality. Past inspections include sounding with nylon mallet and use of a microdrill which suggests minor and localised decay of buttress roots. No fungal fruiting bodies were present at any of my site visits. Recommend annual formal inspection and regular informal checks regarding condition and presence of fungal fruiting bodies. Recommend to crown lift to clear 5m over drive. Climber to report any defects which may not be visible from ground level inspection.	A.1.2 20 to 40 yrs
T14												
Sycamore <i>Acer pseudoplatanus</i>	15	1	520	N	4	4	SM	A: 122.3 R: 6.23	Fair	C: Fair S: Fair B: Fair	See Comment :: Unspecified Located to the south of existing garage, adjacent driveway. Situated in an 'island'. Retaining walls with 1m drop within 2m of the main stem. Main stem bifurcates at 6m, with tight union. Minor deadwood throughout crown. Minor leaf infection by tar spot (<i>Rhytisma acerinum</i>). In my opinion, this tree is likely inappropriate for retention in the context of the proposed development. See Arboricultural Impact Assessment.	C.2 10 to 20 yrs
Age Classifications:	N	Newly planted	EM	Early Mature	Condition:			C	Crown	Stems:	Ø	Diameter
	Y	Young	M	Mature				S	Stem		(Eq)	Equivalent stem diameter using BS5837:2012 definition
	SM	Semi-mature	OM	Over Mature				B	Basal area	ERC:		Estimated Remaining Contributio

Tree and Tag No Species	Hght (m)	Stems		Crown		Age	RP A (m ²) R (m)	Phys Condition	Structural Condition	Preliminary Recommendations		Cat ERC
		No	Ø (mm)	Spread (m)	Clear (m)					Survey Comment		
T15												
Sycamore <i>Acer pseudoplatanus</i>	15	1	410	N	4	6	SM	A: 76.1 R: 4.92	Fair	C: Fair S: Fair B: Fair	No action :: Unspecified Located immediately north west of existing garage. Grown on boundary wall with compromised rooting area. LV power line within 1m of main stem, tree previously heavily pruned to provide clearance, resulting in asymmetric crown which is also within 0.5m of roof of existing garage. Minor deadwood throughout crown. Minor leaf infection by tar spot (<i>Rhytisma acerinum</i>). In my opinion, this tree is likely inappropriate for retention in the context of the proposed development. See Arboricultural Impact Assessment.	C.2 10 to 20 yrs
T16												
Sycamore <i>Acer pseudoplatanus</i>	15	1	410	N	3	6	SM	A: 76.1 R: 4.92	Fair	C: Fair S: Fair B: Fair	No action :: Unspecified Located to the west of existing garage. Immediately west of and contacting boundary wall. LV power line within 1m of main stem, tree previously heavily pruned to provide clearance, resulting in asymmetric crown. Minor deadwood throughout crown. Minor leaf infection by tar spot (<i>Rhytisma acerinum</i>). In my opinion, this tree is likely inappropriate for retention in the context of the proposed development. See Arboricultural Impact Assessment.	C.2 10 to 20 yrs
T17												
Sycamore <i>Acer pseudoplatanus</i>	16	2	496 (Eq)	N	4	4	SM	A: 111.2 R: 5.94	Fair	C: Fair S: Fair B: Fair	No action :: Unspecified Located to the north east of existing school buildings. Immediately north of boundary wall. Telecom line running through crown. LV power line within 2m of main stem. Asymmetric crown which is within 0.5m of existing building. Minor deadwood throughout crown. Minor leaf infection by tar spot (<i>Rhytisma acerinum</i>). In my opinion, this tree is likely inappropriate for retention in the context of the proposed development.	C.2 10 to 20 yrs
Age Classifications:	N	Newly planted	EM	Early Mature	Condition:			C	Crown	Stems:	Ø	Diameter
	Y	Young	M	Mature				S	Stem		(Eq)	Equivalent stem diameter using BS5837:2012 definition
	SM	Semi-mature	OM	Over Mature				B	Basal area	ERC:		Estimated Remaining Contributio

Tree and Tag No Species	Hght (m)	Stems		Crown		Age	RP A (m ²) R (m)	Phys Condition	Structural Condition	Preliminary Recommendations Survey Comment	Cat ERC
		No	Ø (mm)	Spread (m)	Clear (m)						
T18											
Sessile Oak <i>Quercus petraea</i>	24	1	800	N	7	M	A: 289.6 R: 9.6	Good	C: S: B:	See Comment :: Unspecified Located outside of site boundary, to the north west. Access not gained to make full assessment of tree. Measurements estimated. Fine mature tree. Appears to be grown on edge of quarry and has dense vegetation around base. Crown extends to the south and overhangs existing building, contacting roof. Recommend remove low lateral branch to the south back to parent stem at approximately 4m and directly above boundary fence.	A.1.2 >40 yrs
T19											
Goat Willow <i>Salix caprea</i>	12	1	360	N	2	4 SM	A: 58.6 R: 4.31	Fair	C: Fair S: Fair B: Fair	See Comment :: Unspecified Located immediately to the west of access track to the north west of the site. Historic pruning wound back to the main stem at 2m with associated partial decay. Crown extends to the south and contacts roof of existing building. Recommend reduce lateral branches to the south by approximately 2m.	C.2 10 to 20 yrs
T20											
Sycamore <i>Acer pseudoplatanus</i>	16	1	590	N	6	4 M	A: 157.5 R: 7.08	Poor	C: Poor S: Poor B: Fair	No action :: Unspecified Located immediately to the west of access track to the west of the site. Bifurcates at 2m with tight fork and included bark between co-dominant stems. Multiple historic pruning wounds back to the main stem, resulting in high and asymmetric crown. Also apparently the removal of a natural brace at 4m.	C.2 10 to 20 yrs
T21											
Common Ash <i>Fraxinus excelsior</i>	16	1	640	N	5	5 M	A: 185.3 R: 7.68	Poor	C: Poor S: Fair B: Fair	See Comment :: Unspecified Located immediately to the south east of the access track to the west of the site. Bifurcates at 2m with tight fork and included bark. Evidence of Chalara ash dieback (<i>Hymenoscyphus fraxineus</i>) on epicormic shoot on main stem. Tree not in leaf at time of survey so full assessment of physiological condition not possible. Likely limited remaining contribution. In my opinion, this tree is likely inappropriate for retention in the context of the proposed development. See Arboricultural Impact Assessment.	C.2 <10 yrs
Age Classifications:	N	Newly planted	EM	Early Mature	Condition:		C	Crown	Stems:	Ø	Diameter
	Y	Young	M	Mature			S	Stem		(Eq)	Equivalent stem diameter using BS5837:2012 definition
	SM	Semi-mature	OM	Over Mature			B	Basal area	ERC:		Estimated Remaining Contributio

Tree and Tag No Species	Hght (m)	Stems		Crown		Age	RP A (m ²) R (m)	Phys Condition	Structural Condition	Preliminary Recommendations		Cat ERC
		No	Ø (mm)	Spread (m)	Clear (m)					Survey Comment		
T23												
Common Beech <i>Fagus sylvatica</i>	24	1	1020	N	10	3	M	A: 470.7 R: 12.24	Good	C: Good S: Fair B: Good	No action :: Unspecified Located to the north west of access track to the west of the site. Fine mature tree. Bifurcates at 0.5m. Stem diameter measured just above root flare. Tight fork between co-dominant stems. Multiple historic pruning wounds back to scaffolds, occluding well. Minor deadwood throughout crown. Crown extends over wall to the south east of access track, this is not anticipated to be problematic in relation to proposed development.	A.1.2 >40 yrs
T24												
Common Beech <i>Fagus sylvatica</i>	22	1	660	N	4	6	M	A: 197.1 R: 7.92	Good	C: Fair S: Fair B: Fair	See Comment :: Unspecified Located immediately to the south east of boundary wall to the west of the site and to the north west of the existing detached dwelling. Erosion of ground to the south east has exposed void in the rock below the main stem, visible to a depth of 1m below ground level. This appears to have heavily compromised the root development on this side. Tight fork at 3m with extensive included bark. Extended limb from this union extends to the south. Removal of adjacent trees likely results in increased and unaccustomed wind loading experienced by this tree. Crown also extends beyond that of adjacent trees. Recommend reduce entire crown by approximately 2m.	B.2 20 to 40 yrs
Age Classifications:	N	Newly planted	EM	Early Mature	Condition:			C	Crown	Stems:	Ø	Diameter
	Y	Young	M	Mature				S	Stem		(Eq)	Equivalent stem diameter using BS5837:2012 definition
	SM	Semi-mature	OM	Over Mature				B	Basal area	ERC:		Estimated Remaining Contributio

Tree and Tag No Species	Hght (m)	Stems		Crown		Age	RP A (m ²) R (m)	Phys Condition	Structural Condition	Preliminary Recommendations Survey Comment	Cat ERC	
		No	Ø (mm)	Spread (m)	Clear (m)							
T26												
Common Beech <i>Fagus sylvatica</i>	26	1	1160	N	10	6	M	A: 608.8 R: 13.92	Fair	C: Good S: Fair B: Fair	See Comment :: Unspecified Located to the south west of the existing detached dwelling, forms group with adjacent mature beech to the west. Fine mature tree. Annual fungal fruiting body at base of main stem, between buttresses to the north. Likely shaggy scaly cap (<i>Pholiota squarrosa</i>), although not confirmed. Area of minor bark dysfunction on the main stem, to the west, mostly covered by calous growth. Single straight stem to crown break. Dominant tree of the group, and closest to the existing detached dwelling. Minor deadwood throughout crown. Some apparent reduction in physiological condition, minor crooking of shoot tips. Recommend annual formal inspection and regular informal checks regarding condition and presence of fungal fruiting bodies. Recommend prune to reduce heavy lateral branches extending to the north through to the north east by approximately 2m.	A.1.2 20 to 40 yrs
T27												
Common Beech <i>Fagus sylvatica</i>	24	1	1040	N	8	4	M	A: 489.4 R: 12.48	Fair	C: Fair S: Fair B: Fair	See Comment :: Unspecified Located to the south east of the existing detached dwelling. Fine mature tree. Pronounced buttresses and deep fluting to base of main stem. Minor bark dysfunction on main stem to east at 1.3m, just below historic pruning wound. Single straight stem to 10m, trifurcates. Two lower sub-dominant stems with tight unions & included bark, both are naturally braced within crown. Minor deadwood throughout crown. Some apparent reduction in physiological condition, minor crooking of shoot tips. No fungal fruiting bodies were present at any of my site visits. Removal of adjacent mature beech likely results in increased and unaccustomed wind loading experienced by this tree. Recommend reduce height of crown by approximately 3m and lateral reduction of approximately 1.5m. Recommend clear surrounding vegetation within 1m of main stem to facilitate future inspections of base of main stem. Also recommend annual formal inspection and regular informal checks regarding condition and presence of fungal fruiting bodies.	A.1.2 20 to 40 yrs
Age Classifications:	N	Newly planted	EM	Early Mature	Condition:	C	Crown	Stems:	Ø	Diameter		
	Y	Young	M	Mature		S	Stem		(Eq)	Equivalent stem diameter using BS5837:2012 definition		
	SM	Semi-mature	OM	Over Mature		B	Basal area	ERC:		Estimated Remaining Contributio		

Taxal Edge - BS5837 Initial Tree Constraints Plan

SCALE :
1 : 800 @ A4

DATE :
28/10/2020

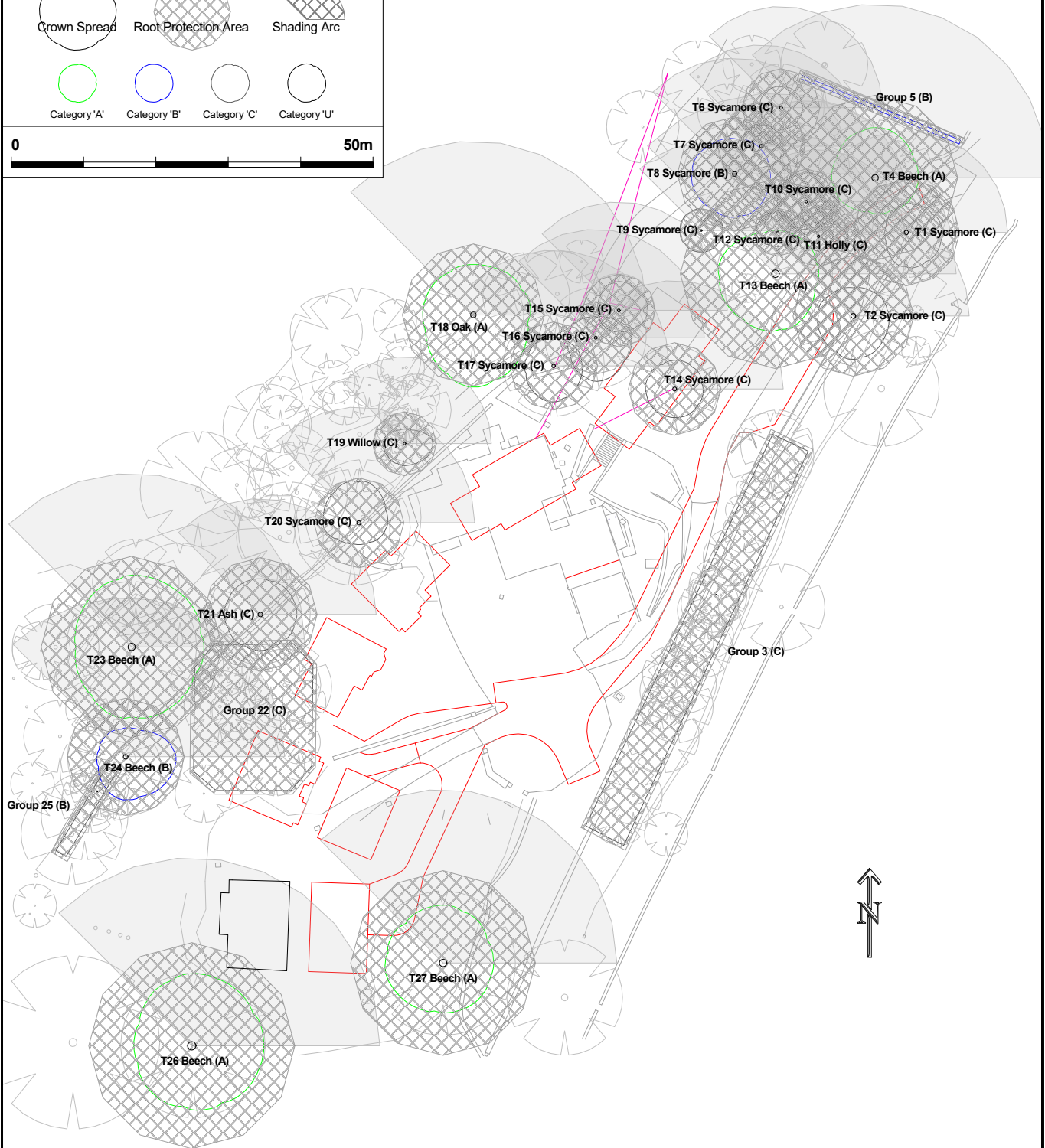
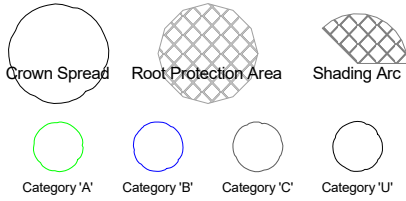
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Legend

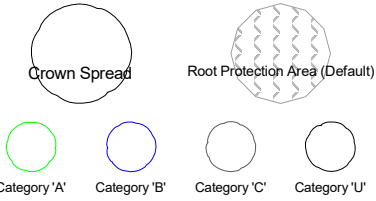


Taxal Edge - BS5837
Tree Removal & Retention Plan

SCALE : 1 : 800 @ A4 DATE : 28/10/2020 N
MAP FILENAME : [Filename]

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Legend



Legend

- Proposed Site Layout
- Trees Proposed for Removal

