

Arboricultural Appraisal

(Incorporating an Arboricultural Impact Assessment and Tree Protection Measures in accordance with BS5837:2012: *trees in relation to design, demolition and construction – Recommendations*)

Project: Old School House, Bicton, SY3 8EQ

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On Behalf of: Mrs Quigley

Foreword

Salopian Consultancy Ltd is an Arboricultural/Ecological consultancy which provides inputs to guide developers and architects during the planning process.

Core services include BS5837:2012 tree surveys, condition assessments, mortgage applications and woodland management. In addition, Salopian Consultancy Ltd have in house ecological expertise enabling them to perform a range of Phase 1 and Phase 2 ecological surveys.

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Executive summary

Brief of the study and context of development

This report has been prepared to identify the key arboricultural constraints to inform a planning application for the extension and alterations to the Old School House at Bicton. The aim of the study has been to highlight those arboricultural constraints so that significant impacts upon trees are avoided or minimised as far as possible whilst identifying opportunities to enhance the tree stock in the long term.

Survey methods

A tree survey was undertaken in accordance with the methodology set out in **BS5837:2012 Trees in relation to design, demolition and construction – Recommendations**. This information has been presented to the design team to act as a tool to ensure consideration has been given to those trees on and immediately off site during the design process.

An Arboricultural Impact Assessment (AIA) has been performed to provide an informed account on how foreseeable direct and indirect impacts associated with development may impact upon the tree stock. Following completion of the AIA, tree protection measures have been prescribed to demonstrate how those trees proposed for retention can be protected during development.

Findings and recommendations

The tree survey process identified that the tree stock in its nature is somewhat congested and varies in quality with numerous tall, etiolated items and cohesive tree groups. Many of which being to outgrowth their environment, notably **6G**.

The AIA identified that the removal of five 'B grade' trees of moderate quality and value will be needed to implement the proposal and improvements to the visibility splays, in addition to the partial or complete removal of six 'C grade' hedgerows and tree groups of low Arboricultural merit.

In addition, minor encroachment has been identified within the periphery of the RPA of **1T**, a 'C grade' early mature beech, by an area of proposed new hard standing. This level of encroachment (circa 2% of the RPA), is considered within the species ability to tolerate and therefore hand dig methodologies have been proposed during these works to provide a degree of caution in areas where tree roots may be encountered.

Those remaining trees can be protected during construction by means of protective barrier fencing to maintain a Construction Exclusion Zone (CEZ) that respects the RPA of each tree. Such protection measures and provisions for new planting could be secured by a suitably worded planning condition.

Section 1: Tree Survey

Introduction

- 1.1 This report, its plans and associated appendices have been prepared on behalf of Mrs Quigley 'the client', to meet the requirements of **BS5837:2012 Trees in relation to design, demolition and construction - Recommendations**, at Old School House, hereafter referred to as 'the site'.
- 1.2 The tree survey was performed on the 06th of February 2024 by Douglas Williams, Salopian Consultancy Ltd's Principal Arboriculturalist. Doug has over 15 years' experience working within the Arboricultural industry and is a professional member of the Arboricultural Association. He holds a MSc in Biological Recording, a BSc (Hons) in Biological Sciences, L4 Diploma in Arboriculture, the LANTRA Professional Tree Inspection Certificate and undertakes regular annual CPD with a range of recognised training providers.
- 1.3 The tree survey has been undertaken in accordance with the methodology set out in **Section 4.4** of **BS5837:2012** which is summarised in **Appendix 1**.
- 1.4 The data obtained from this survey is presented within the Tree Schedule and depicted in the Tree Constraints Plan (**Plan 1**) towards the end of the report. The position of those trees surveyed are approximate, derived from geo reference data, measurements taken on site and distance from features included in **Appendix 2**. Each item surveyed has been allocated a sequential identification number which correlates with the Tree Schedule.
- 1.5 **Plan 1** depicts the theoretical rooting system of each tree using a yellow circle or polygon with the crown spreads of high-grade trees illustrated in green, moderate quality trees shown in blue and low-grade trees in grey. Those trees which have a limited life expectancy due to either a compromised structure or poor physiological condition are shown with red canopy spreads and referred to as 'U grade' trees.
- 1.6 The classification of trees has been undertaken in accordance with **Table 1 Cascade Chart for Tree Quality Assessment** described in **BS5837:2012** to provide a hierarchy system for tree retention based on their condition and contribution to the amenity of the local area.
- 1.7 The theoretical RPA for each tree has been calculated using formulas provided in **Section 4.6** of **BS5837:2012**. Both **Plan 1** and **Plan 2** acknowledge that pre-existing site conditions may prevent tree roots distributing asymmetrically. In such instances RPAs may be modified but not reduced based on arboricultural reasoning.
- 1.8 The findings of the tree survey have been used to highlight initial design implications with the aim of guiding the design process to encourage a harmonious relationship between trees and development.

Scope of the study

- 1.9 The primary focus of the study is to inform the planning process by;
- Meeting the validation requirements of Shropshire Council by presenting the findings of a tree survey undertaken in accordance with **BS5837:2012**.
 - Present those arboricultural constraints in a clear and concise manner to aid the design process.
 - Perform an assessment of those likely impacts associated with proposed site layout DRG.**SA44442-BRY-ST-PL-A-0005 B**
 - Detail appropriate tree protection measures and working methodologies to safeguard trees proposed for retention during construction.

Limitations

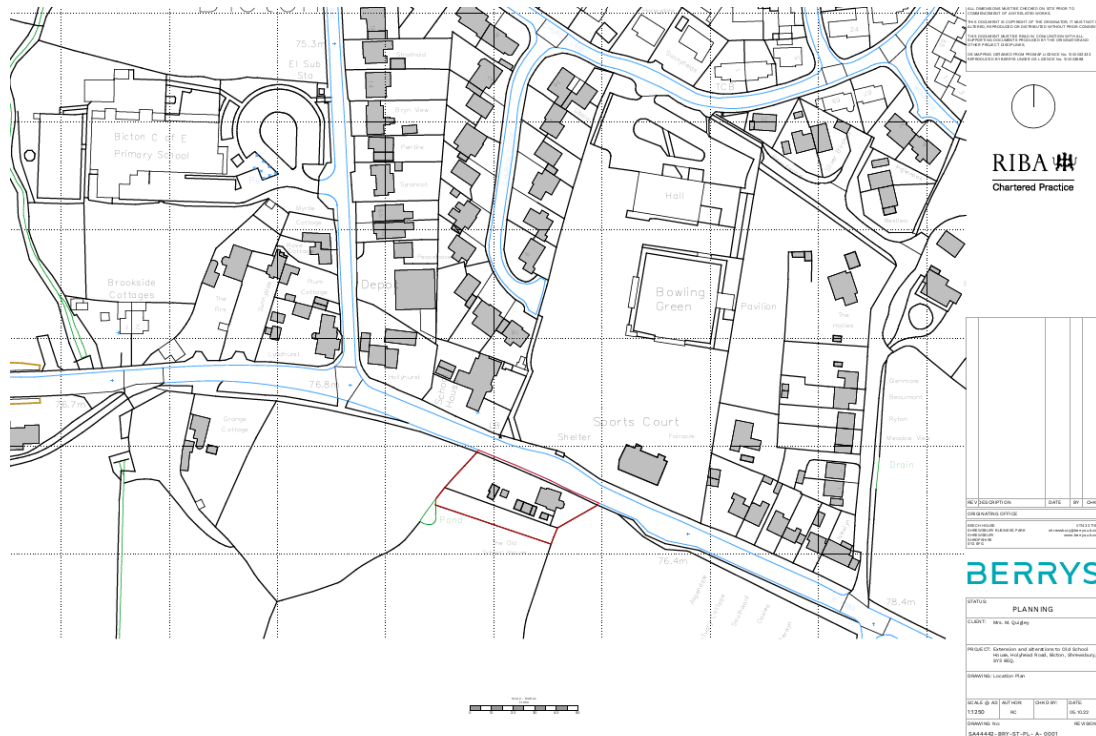
- 1.10 This report does not;
- Provide an assessment of the likelihood of subsidence caused by the interactions between water availability, soils and tree roots, at present or in future years. Foundation design should be undertaken in accordance with the guidance available in **National House Building Council (NHBC) publication Building near trees, Chapter 4.2** following a soil assessment by competent personnel.
 - Carry out a detailed structural assessment of each tree surveyed. The absence of recommended tree work in **Schedule 1** does not imply that a tree is safe. Trees are dynamic structures and even those trees in good condition can fail or enter decline under extraordinary physical stress or following infection by pests and disease.
 - The accuracy of the findings of this report are reliant on the information presented in the existing and proposed site layout. Checks of the accuracy of third-party information have not been undertaken.

Site location and context of development

- 1.11 The site is situated within the village of Bicton, set to the south of the B4380 which provides existing highway access arrangements. The application area encompasses the curtilage of the property referred to as the Old School and is bound to the east, south and west by land of an arable nature.

- 1.12 An initial assessment of the proposal identified that planning permission is sought for the demolition of a number of outbuildings, extension of the main house and amendments to the highway access point to achieve modern visibility splays.

Figure 1 Site location plan



Overview of the tree stock

- 1.13 The tree stock comprises of a wide range of species and age classes, largely falling within the semi mature to early mature age ranges. The majority of the trees recorded include tall etiolated stands of beech Leyland cypress and western red cedar which have begun to outgrow their setting.
- 1.14 Occasional smaller ornamental specimens of snake bark maple, variegated holly and corkscrew hazel were noted, as well as cohesive groups of *Prunus laurocerasus* 'Camellifolia'.

Statutory legislation & planning policy

- 1.15 Necessary checks prior to all tree works must be undertaken by the appointed tree work contractors to ensure statutory laws are not contravened. In addition to individual protection by virtue of TPOs or Conservation Areas (CA) consideration should also be given to restrictions to tree removal imposed by the Forestry Act (1967) and the potential to support protected species (notably nesting birds and roosting bats) governed by the Wildlife and Countryside Act (1981) and EU Habitats directive, detailed further in **Appendix 3**.
- 1.16 Trees have many social, ecological and cultural benefits and are recognised for their economic value through the ecosystem services they provide. Such services include, but are not limited

to; shade provision, pollution absorption/interception¹, carbon sequestration/storage and stormwater attenuation reducing the risk of flooding and soil erosion². In addition, numerous studies³ have shown that the presence of mature trees provides significant physiological and psychological benefits. The demand for properties set within neighbourhoods with mature trees is also reflected by higher average house prices, as is the investment in areas with established green infrastructure “environmental attractiveness”^{4 5}.

- 1.17 The importance of trees are recognised in various European and UK legislation such as; EU Habitats directive, National Planning Policy (2021) and the Town and Country Planning Act (1990). These policies refer to trees in respect to conserving and enhancing the natural environment and indirectly in relation to issues such as climate change, biodiversity and biosecurity.
- 1.18 Para 175 of the NPPF states that local authorities should reject any application where *“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 and a suitable compensation strategy exists;*
- 1.19 Natural England⁶ and the Forestry Commission standing advice is that a minimum buffer of 15m should be kept from ancient woodland to avoid impacts upon ancient woodland. There may be instances where this buffer is increased to negate impact associated with air pollution and other non-direct impacts. Individual Ancient or veteran trees require a buffer area of 15 times the tree’s diameter or 5m greater than the edge of the tree’s canopy, whichever is greater.
- 1.20 Trees should be valued as assets given the valuable ecosystem services they provide and therefore provisions for new tree planting should be seen as an investment. Local planning policy CS6 Sustainable Design and Development Principles, CS17 Environmental Networks, MD2 Sustainable Design and MD12 Natural Environment recognise the importance of safeguarding and protecting those natural features that contribute towards the local area, of which trees form an important component. The retention and where possible the addition of new tree planting to bolster and increase the existing canopy cover of a site should be seen as a contribution to sustainable development.

¹Nowak *et al.* (2006) Air pollution Removal by Urban Trees and Shrubs in the United States. *Urban Forestry and Urban Greening* 4, p115-123

² <http://www.woodlandtrust.org.uk/en/moretrees-moregood/Documents/Trees-flooding.pdf>

³ R.S.Ulrich Health Benefits of Gardens in Hospitals Chalmers University of Technology

⁴ CABI (2005) Does money grow on trees?

<http://webarchive.nationalarchives.gov.uk/20110118095356/http://www.cabi.org.uk/files/does-money-grow-on-trees.pdf>

⁵ Gripaios *et al.* (1997) The Role of Inward Investment in Urban Economic Development: The Cases of Bristol, Cardiff and Plymouth

⁶ <https://www.gov.uk/guidance/ancient-woodland-and-veteran-trees-protection-surveys-licences>

Section 2: Arboriculture Impact Assessment

Summary of impacts

- 2.1 The Arboricultural Impact Assessment (AIA) is a desk-based study which has been undertaken by superimposing the final site layout (**Appendix 4**) onto **Plan 1** to produce **Plan 2** which illustrates the foreseeable impacts associated with development.
- 2.2 Development has the potential to cause a number of direct and indirect impacts upon trees that can be detrimental to their health. This section highlights those impacts that the construction process is likely to have upon the tree stock and gives consideration to the likely conflicts that the built form may have with those retained trees in future years.
- 2.3 **Plan 2** depicts those trees which are to be retained with their sequential numbering, full RPAs and crown spreads intact. Those trees and hedgerows which will need to be removed to implement the proposal are illustrated with a infilled red canopy spread and their RPAs omitted.
- 2.4 Impacts associated with construction activities can in most cases be reduced or completely mitigated for in the first instance through the installation of protective barrier fencing to maintain a stand-off area from trees. This stand-off area is referred to as the Construction Exclusion Zone (CEZ). Where activities within the RPAs of retained trees are necessary, specialised construction methods and working practices will be required to mitigate impacts to an acceptable level as detailed in **Section 3**.

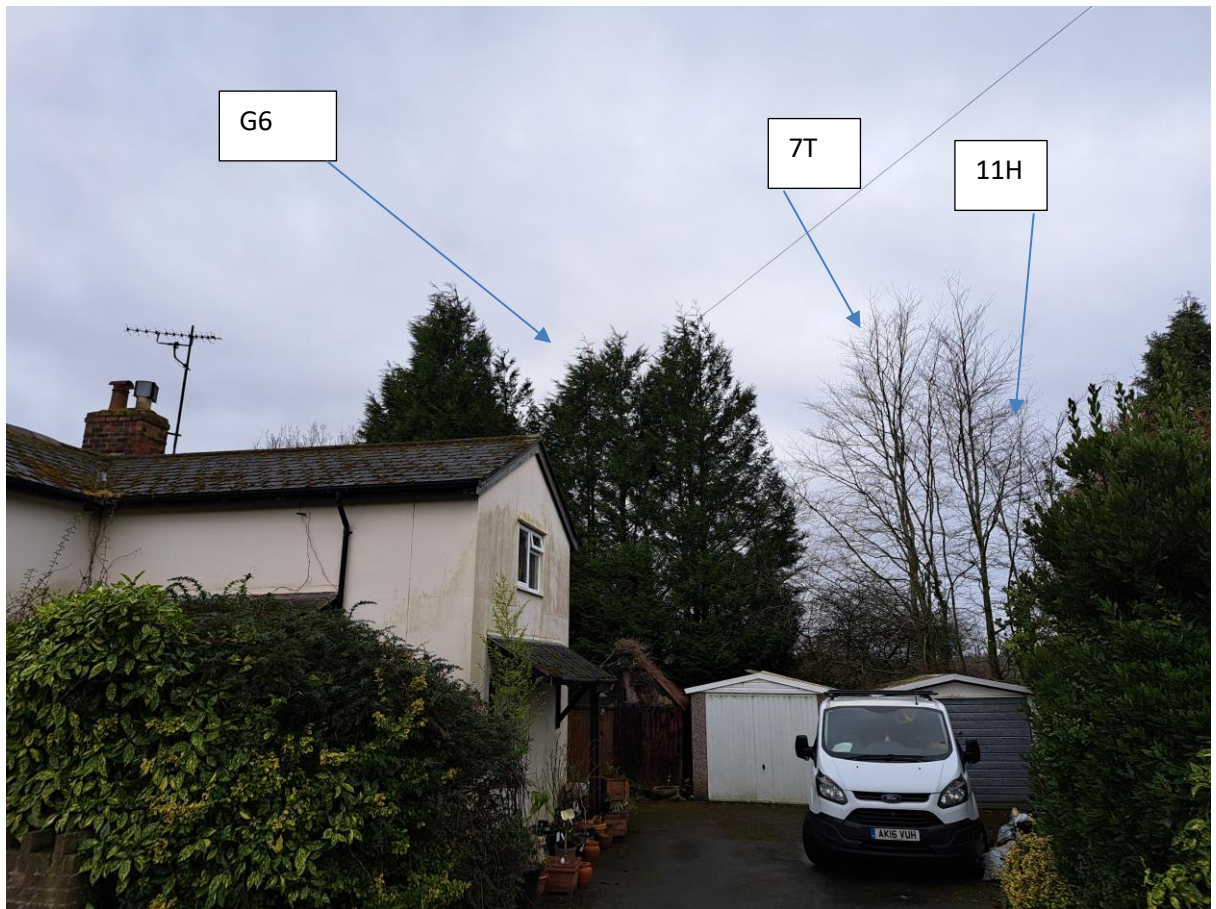
Table 1 Summary of tree removal/impacts

Impacts	A Grade Items	B Grade Items	U/C Grade Items
Trees/Hedgerow loss	N/A	The majority of 15H All of 7T, 9T, 10T, 18T	Part of 4H, 5H, 11H, 19G All of 6G, 8G
Tree pruning	N/A	N/A	N/A
Activities within RPAs	N/A	N/A	1T
Temporary RPA set back	N/A	N/A	N/A
Conflicts with shading	N/A	N/A	N/A

Tree removal

- 2.5 Review of the proposed site layout identified the need to remove four 'B grade' items and the majority of a 'B grade' hedgerow to implement the proposed design. In addition, the removal of parts of four 'C grade' hedgerows/tree groups and the complete of removal of two 'C grade' tree groups is also foreseeable. The removal of these trees will be needed to implement the extension of the building, amendments to the driveway and improvements to the visibility splays.

Figure 2 6G and 7T proposed for removal



Tree pruning

- 2.6 The pruning of canopies of retained trees is not envisaged as part of the proposal. Where required as part of the future management of the property, tree works should be undertaken in accordance with **BS3998:2010 Tree work. Recommendations** and in line with those statutory controls and permissions outlined in **Appendix 3** by suitably trained and insured Arborists. Key requirements of the standard include target pruning back to sufficient growth points and minimising the size/number of pruning cuts.

Activities within RPAs

- 2.7 A review of the proposed site plan identified that a small section of proposed paving falls within the western fringes of the RPA of **1T**, equating to 2%.
- 2.8 This level of encroachment is considered minor and within the species ability to tolerate. It is advised that excavation within this area should be undertaken using a hand dig methodology as discussed in **Section 3** to exercise a degree of caution in areas where tree roots may be encountered.

Temporary RPA set back

- 2.9 The proposed site plan has not identified the need to enter areas of exposed RPAs.

Shading and future growth of trees

- 2.10 The building and proposed extension falls outside of the shade arc of those trees proposed for retention such that future issues with pressures to prune or an overbearing influence are not anticipated.

Utilities

- 2.11 It is anticipated that underground and overhead services can be located outside the RPAs and canopies of retained trees. Where unavoidable, allowances are made for the use of hand dig methodologies or trenchless insertion methods so that roots can be retained, and desiccation avoided as permitted in **Section 7.1 and 7.7 of BS5837:2012**

Storage of materials

- 2.12 Space for the storage of materials and vehicles during site preparation and construction is plentiful within the site. It is envisaged however that the delivery of materials and removal of arisings, will be managed via a phased programme particularly for ground works to make best use of the space available.

New tree planting

- 2.13 A key consideration of any future tree planting scheme will be the planting of species in areas where they can achieve their full potential and expected stature without outgrowing their environment. Planting trees in close proximity to structures and existing trees or in high densities often results in tall etiolated standards or stunted growth forms, both of which should be avoided which has already been seen to date within the current tree stock.
- 2.14 New Tree and hedgerow planting should meet the requirements of **BS8545: 2014 Trees: from nursery to independence in the landscape. Recommendations** with specific reference to the procurement of new trees, species selection, aftercare and maintenance. This could be achieved via planning condition through a formal Tree Planting Scheme.

Figure 3 Poor planting practices to avoid: Examples of poor planting design, involving medium growing species in close proximity to structures and paved surfaces, likely resulting in the need for tree removal/cyclical pruning before maturity is reached



Figure 4 Poor planting practices to avoid: Restricted rooting volumes, impermeable surfacing and planting trees near underground services/drainage runs



Section 3: Arboricultural Method Statement

Schedule of development

- 3.1 The AMS details specific solutions to those impacts raised in **Section 2** in order to mitigate/reduce potential impacts upon those trees proposed for retention. An outline program of management and an auditable process has been prepared to demonstrate that those tree protection measures proposed are capable of providing sufficient protection for trees pre, during and post development.
- 3.2 Such a program of activities is advised under the guidance of an experienced Arboricultural Clerk of Works (ACW) to ensure that the content of this method statement is understood and implemented effectively.
- 3.3 Direct supervision by the ACW is advised at pre-determined phases to assist with the development process and ensure correct implementation of tree-protection measures as illustrated within **Plan 2**. A copy of this report plans and appendices will be available on site throughout the duration of construction.

Stage 1: Pre-commencement meeting

- 3.4 An appropriately experienced ACW will be appointed at the cost of the developer to ensure tree-protection measures are understood and enforced which could be secured using a suitably-worded planning condition. Monthly site meetings will be scheduled to identify any issues associated between trees and construction before conflicts occur. A pre-commencement meeting will be held before the commencement of works, normally attended by the ACW, the site manager and a Local Planning Authority (LPA) representative.
- 3.5 The sequence of construction and implementation of tree-protection measures will be discussed further to identify any changes or difficulties that may arise. The extent of the CEZ/Protective Barrier Fencing will be double checked during this meeting and an inspection regime will be agreed upon by all parties and the timing of protection/mitigation measures will follow the timetable below.

Table 2: Implementation and timings of tree protection/mitigation measures

Actions	Timing					
Installation of protective barrier fencing	■					
Tree removal		■				
Excavation using hand dig methodology within RPA 1T			■			
Monthly check to ensure tree protection measures are upheld			■	■		
Ground works and construction phase				■		
Removal of protective barrier fencing					■	
Post development tree survey						■

Stage 2: Pre commencement tree works and Installation of tree protection measures

- 3.6 The removal of those trees and tree groups listed in **Table 1** and depicted within **Plan 2** with a red infilled canopies will be completed prior to any construction works as will the installation of tree protection measures e.g. protective barrier fencing and ground protection measures.
- 3.7 The appointed tree contractor must hold adequate public liability, product liability and employer's liability insurances, with the relevant qualifications for the tasks at hand. All tree work operations will be undertaken in accordance with **BS3998: 2010 Tree works. Recommendations**. All necessary checks prior to all tree works must be undertaken by the appointed tree work contractors to ensure statutory laws are not contravened which includes the potential for trees to support protected species (notably nesting birds and roosting bats) governed by the Wildlife and Countryside Act (1981) and EU Habitats directive, detailed further in **Appendix 3**.
- 3.8 Construction activities have the potential to cause long-term detriment to trees. It is therefore essential that appropriate tree-protection measures are installed and maintained throughout the duration of construction to prevent avoidable impacts upon trees. The position of these measures will be confirmed by an appointed ACW prior to the implementation of construction activities.
- 3.9 The majority of a trees rooting system is located within the upper 50cm of the soil horizon. This layer provides the optimal level of organic material, water, enabling tree roots to respire, grow, repair and drive photosynthesis. Compaction or disturbance of this layer can have a serious effect on a trees ability to perform these functions. Root severance must be avoided to prevent undermining a tree's stability in addition to causing physiological stress.
- 3.10 To ensure adequate protection is afforded to the root system, stem and canopy of retained trees, the extent of the RPA will be enclosed using a protective barrier fencing as illustrated in **Appendix 5**. **Plan 2** depicts the position of protective barrier fencing as a solid pink line and must be checked against the RPA measurements provided in the Tree Schedule. Once installed the ACW will inform the LPA that protective barrier fencing is in place and fit for purpose to allow works to commence.
- 3.11 The area within the line of protective barrier fencing is referred to as the CEZ, illustrated as an orange hatched area in **Plan 2**. This area will be treated as sacrosanct and will not be entered during construction. Once installed, protective barrier fencing must not be removed or altered without the prior approval of the ACW and LPA.
- 3.12 Access to the site will be restricted to the existing vehicular access from the B4380. Parking of vehicles, plant and storage of materials will be located within a designated compound, 2m from the RPA of any tree.
- 3.13 Lighting of fires or mixing of materials will not be permitted within 2m of the CEZ. No mixing of materials will take place uphill from the CEZ to prevent leakage into these areas. In the event of spillage, all works will halt and the ACW will be contacted for advice. All plant and

machinery will be fitted with spill kits and water will be available to flush spilt material to avoid contamination of the rooting environments.

- 3.14 The placement of cranes and lifting machinery will be outside of the RPA of any retained trees. The use of a banksmen and additional workers to assist with tag lines will be undertaken to control loads and avoid twisting in the wind, which poses the risk of inadvertently striking parts of trees.
- 3.15 Biosecurity control measures shall be implemented to avoid transportation of pest or disease to and from the site in line the **Arboricultural Associations Guidance Note 2 Application for Biosecurity**. This broadly involves cleaning machinery, uniform, PPE and vehicles using a disinfectant to minimise transportation of soil, water and plant materials from the works site.
- 3.16 Cases of ill health in trees must be brought to the attention of the ACW. The presence of a pest or disease will then be reported using the Forestry Commission Tree Pest and Pathogen sighting reporter (Tree Alert) <https://treealert.forestry.gov.uk>.

Stage 3 Works to be performed under supervision by ACW.

- 3.17 Where construction activities are undertaken within the RPA of retained trees, direct supervision by the appointed ACW is required. The ACW will be given a minimum of two weeks' notice prior to such works.

Paving within RPA of 1T

- 3.18 The proposed paving adjacent to the eastern aspect of the property falls within the extremities of the RPAs of **1T** (circa 2%), therefore is not considered likely to have a significant impact upon the condition of this tree. Any excavation will be undertaken using hand dig methodologies to provide a degree of caution where tree roots may be encountered to act as a failsafe measure. Such actions are permitted in **Section 7.2 of BS5837:2012** and restricted to the use of hand tools only.
- 3.19 In the event that tree roots are encountered, those smaller than 25mm in diameter may be pruned back using a sharp tool to perform a clean cut. In the unlikely event roots above 25mm are encountered, works will halt, exposed roots will be covered with hessian to prevent desiccation and advice sought from the appointed ACW.

Temporary Access Within RPAs

- 3.20 Movement across the RPA's of retained trees is not foreseeable. If required this will only be permitted where existing hard standing is present capable of acting as ground protection. Ground protection measures must be installed as specified in **Appendix 6** within any other part of an RPA which has not been subject to the activities above to prevent the compaction of underlying soils.
- 3.21 For pedestrian use the installation of single scaffold boards placed on top of a compression resistant, layer such as 100mm of wood chip would provide sufficient ground protection

during pedestrian movement. Alternatively scaffold boards placed on top of a scaffold frame to form a suspended walkway would also be sufficient. The set back of protective barrier fencing will only be permitted during those specific actions which require it after which the line of protective barrier fencing will be reinstated.

Landscaping and other matters

- 3.22 In the event the installation of boundary fences are required to denote residential plots, new fence posts and panels will be undertaken by hand, any concrete post holes will be lined with plastic to ensure no leakage into the surrounding soil of those trees to be retained and ground protection used where access is necessary within RPAs.
- 3.23 Any landscaping works such as grading of soil levels, application of top soil will not be undertaken within RPAs unless specifically agreed with the ACW.
- 3.24 Any planting of shrubs, or seeding/laying of turf within the RPAs of retained tree will be undertaken by hand, with no machinery or vehicles permitted within these areas.

Stage 4 Monitoring of tree protection measures

- 3.25 The ACW will undertake predetermined site visits agreed during the pre-commencement meeting, to ensure tree protection measures remain intact and fit for purpose. In the event that conflicts arise between trees and construction activities, it is the responsibility of the site manager to contact the ACW to seek advice on alternative working methods.

Stage 5 Removal of tree-protection measures

- 3.26 Following completion of works, tree protection measures can be dismantled and removed from site. A post-construction tree survey undertaken by the project ACW is advised to highlight any remedial tree work required prior to occupation of the site.

Concluding statement

- 3.27 Provided that the tree protection measures and working methodologies detailed in the AMS are adhered to, no adverse effects upon trees proposed for retention or conflicts with construction activities are envisaged. Such protection measures and provisions for new planting could be secured by a suitably-worded planning condition.
- 3.28 The tree survey and arboricultural appraisal is valid for two years. It is recommended that a biennial survey of the tree stock is undertaken as part of the proactive management of those trees on site to help maintain a healthy tree population and sufficient safety threshold. In the event that the development proposals alter significantly, an updated impact assessment must be undertaken to identify the likely impacts upon the tree stock and amendments made to the AMS accordingly.

Tree Schedule

Site Old School House
 Client Mrs Quigley
 Surveyor D.Williams
 Survey date 06/ 02/2024
 Climatic conditions overcast

Tree Reference No.	Species	Stem Diameter (mm) at 1.5m	Tree Constraints Information								Life Stage	Physiological Condition	Structural Condition	Recommendations	Priority Code
			Category Grade	Radius of RPA (m)	Area of RPA (m ²)	Height (m)	Canopy Spread (m)								
							N	E	S	W					
1T	Beech	420	C1	5.0	79.8	6	3	4	4	4	Early-mature	Fair	Has been heavily reduced in the past.	N/A	N/A
2T	Scots Pine	170	C1	2.0	13.1	8	0.5	0.5	0.5	0.5	Semi-mature	Fair	Fastigate variety. Tall slender habit.	N/A	N/A
3H	Holly, Hawthorn, Privet	75	B3	0.9	2.5	1.5	0.5	0.5	0.5	0.5	Early-mature	Fair	Field boundary hedgerow.	N/A	N/A
4H	Hawthorn	75	C1	0.9	2.5	1.5	0.5	0.5	0.5	0.5	Early-mature	Fair	Defunct in parts.	N/A	N/A
5G	Laurel, Cypress spp & Yew	75	C1	0.9	2.5	1.5	0.5	0.5	0.5	0.5	Early-mature	Fair	Ornamental tree group.	N/A	N/A
6G	Western Red Cedar	300	C1	3.6	40.7	13	3	3	3	3	Early-mature	Fair	Limited clearance from the main house. Large growing species will outgrow it's setting with time.	N/A	N/A
7T	Beech	330	B1	4.0	49.3	11	1	3	3	3	Semi-mature	Fair	Tall, etiolated growth form.	N/A	N/A
8G	Leyland cypress	300	U	3.6	40.7	2	0.5	0.5	0.5	0.5	Semi-mature	Poor	Topped at 2m, little photosynthetic material remaining.	N/A	N/A
9T	Leyland cypress	300	B1	3.6	40.7	10	1.5	2	3	1.5	Semi-mature	Fair	Tall, etiolated growth form, heavily asymmetric due to group competition.	N/A	N/A
10T	Beech	260	B1	3.1	30.6	10	4	2.5	1.5	2	Semi-mature	Fair	Tall, etiolated growth form, heavily asymmetric due to group competition.	N/A	N/A
11H	Beech	100	C1	1.2	4.5	2 to 8	1	1	1	1	Semi-mature	Fair	Previously managed as a hedgerow, the southern section has now been left to grow into tall etiolated poles reaching 8m in height whilst the northern half remains managed as a hedgerow	N/A	N/A

- The tree survey process has been undertaken in accordance with [Section 4.4 of BS5837:2012 Trees in Relation to Design, Demolition and Construction Recommendations](#), summarised in [Appendix 1](#) of the Arboricultural Appraisal.
- Each item surveyed has been given a sequential number with the respective prefix 'T' for trees 'G' for groups of trees, 'H' for hedgerows and 'W' for woodland which corresponds to the Tree Constraints Plan ([Plan 1](#)) and Tree Protection Plan ([Plan 2](#)).
- The Root Protection Area (RPA) values have been calculated using the methodology set out in [Section 4.6 and Annexes C & D of BS5837:2012](#). Where pre-existing site conditions may indicate that the rooting system is not asymmetric, the RPAs may be modified in [Plan 1](#) and [Plan 2](#) but the area not reduced based on arboricultural reasoning. Such instances include the physical obstruction to root development or inhospitable rooting environments.
- Where trees are located outside of the client land ownership, or access is not achievable stem diameter have been estimated, highlighted using the suffix #
- Category Grading afforded to each item surveyed provides a hierarchy system for retention based on condition, amenity value and longevity in accordance with [Table 1 Cascade Chart for Tree Quality Assessment described in BS5837:2012](#). A = High value, B = Moderate value C = low value & U compromised condition. Suffix 1,2 & 3 related to Arboricultural, Cultural and Ecological value respectively.
- Priority codes provide a classification of the urgency of works; Code 1 = Undertake within 1 month or sooner, Code 2 = Perform within 12 months or sooner, Code 3 = Undertake once all code1 and 2 works are complete, within 12 months
- Where specified small diameter limbs/deadwood refer to a diameter <75mm, moderate deadwood/medium diameter limb equates to that of 75mm – 150mm and large diameter limbs/deadwood are those that exceed a diameter of 150mm

Site Old School House
 Client Mrs Quigley
 Surveyor D.Williams
 Survey date 06/ 02/2024
 Climatic conditions overcast

Tree Constraints Information															
Tree Reference No.	Species	Stem Diameter (mm) at 1.5m	Category Grade	Radius of RPA (m)	Area of RPA (m2)	Height (m)	Canopy Spread (m)				Life Stage	Physiological Condition	Structural Condition	Recommendations	Priority Code
							N	E	S	W					
12H	Hazel	75	C1	0.9	2.5	1.5	0.5	0.5	0.5	0.5	Semi-mature	Fair	Provides a boundary feature.	N/A	N/A
13G	Yew , Beech, Corkscrew Hazel, Apple, Hazel, Laurel Norway spruce & Variegated Holly	200	C1	2.4	18.1	10	3	3	3	3	Semi-mature	Fair	Congested tree group.	N/A	N/A
14T	Variegated Holly	75	C1	0.9	2.5	5	1.5	1.5	1.5	1.5	Semi-mature	Fair	Set within hedgerow.	N/A	N/A
15H	Hawthorn	75	B2	0.9	2.5	1.5	0.5	0.5	0.5	0.5	Early-mature	Good	Provides a formal boundary feature with screening to and from the highway.	N/A	N/A
16T	Snake bark maple	190, 150, 120	B1	3.2	33.0	4	2	2	2	2	Early-mature	Good	A small, attractive ornamental tree.	N/A	N/A
17T	Variegated Holly	110	C1	1.3	5.5	4	1.5	1.5	1.5	1.5	Semi-mature	Fair	Low arboricultural merit. Becoming engulfed by 19G	N/A	N/A
18T	Corkscrew willow	280	B1	3.4	35.5	5	2	2	2	2	Early-mature	Good	Stem has partially engulfed iron guard.	N/A	N/A
19G	Blackthorn, Holly , <i>Prunus laurocerasus</i> 'Camellifolia'	90	C1	1.1	3.7	2.5	1	1	1	1	Semi-mature	Fair	Ornamental planting provides a division between driveway and garden to the west.	N/A	N/A

- The tree survey process has been undertaken in accordance with [Section 4.4 of BS5837:2012 Trees in Relation to Design, Demolition and Construction Recommendations](#), summarised in [Appendix 1](#) of the Arboricultural Appraisal.
- Each item surveyed has been given a sequential number with the respective prefix 'T' for trees 'G' for groups of trees, 'H' for hedgerows and 'W' for woodland which corresponds to the Tree Constraints Plan ([Plan1](#)) and Tree Protection Plan ([Plan 2](#)).
- The Root Protection Area (RPA) values have been calculated using the methodology set out in [Section 4.6 and Annexes C & D of BS5837:2012](#). Where pre-existing site conditions may indicate that the rooting system is not asymmetric, the RPAs may be modified in [Plan 1](#) and [Plan 2](#) but the area not reduced based on arboricultural reasoning. Such instances include the physical obstruction to root development or inhospitable rooting environments.
- Where trees are located outside of the client land ownership, or access is not achievable stem diameter have been estimated, highlighted using the suffix #
- Category Grading afforded to each item surveyed provides a hierarchy system for retention based on condition, amenity value and longevity in accordance with [Table 1 Cascade Chart for Tree Quality Assessment described in BS5837:2012](#). **A** = High value, **B** = Moderate value **C** = low value & **U** compromised condition. Suffix 1,2 & 3 related to Arboricultural, Cultural and Ecological value respectively.
- Priority codes provide a classification of the urgency of works; Code 1 = Undertake within 1 month or sooner, Code 2 = Perform within 12 months or sooner, Code 3 = Undertake once all code1 and 2 works are complete, within 12 months
- Where specified small diameter limbs/deadwood refer to a diameter <75mm, moderate deadwood/medium diameter limb equates to that of 75mm – 150mm and large diameter limbs/deadwood are those that exceed a diameter of 150mm

Appendix 1: Summary of BS5837:2012 survey methodology

The methodology adopted for this survey is based on guidelines set out in **BS5837:2012 Trees in Relation to Design, Demolition and Construction Recommendations**, especially **Section 4.4**, 'Tree Survey'.

The tree survey includes all trees and other significant vegetation with a stem diameter of >75mm at 1.5m within the site, in addition to those located beyond the boundaries within a distance of 12 times their stem diameter. The position of those trees surveyed are approximate, derived from geo reference data, measurements taken on site and distance from features included in **Appendix 2**.

All trees have been visually inspected from ground level, with no climbing or further detailed investigative tests undertaken. All measurements detailed in the Tree Schedule are metric and have been recorded in accordance with **Section 4.4.2.5 of BS5837:2012** summarised below. Where access to trees has been restricted, either as a result of vegetation, ground conditions or third party land ownership, dimensions have been estimated and highlighted using symbol '#' in **Schedule 1**.

Any recommendations given regarding longer-term management have been made on the basis of optimising the life expectancy of trees, given their current situation and any effects, which may arise as the results of the development proposal.

Sequential reference number

All numbering of surveyed items is sequential with the respective suffix 'T' for trees 'G' for groups of trees, 'H' for hedgerows and 'W' for woodland.

Species

Common English names are used wherever possible for simplicity.

Stem diameter (DBH)

This is the measurement of the stem diameter in millimetres taken at 1.5m above ground level in accordance with **Annex C of BS5837:2012**.

Category Grading

Trees have been assigned 'U' or category grading 'A' to 'C' in accordance with the Cascade Chart given in **BS5837:2012** reproduced overleaf.

RPA radius & RPA Area (m²)

Both values been calculated using the methodology set out in **Section 4.6 and Annexes C & D of BS5837:2012**. Where pre-existing site conditions may indicate that the rooting system is not asymmetric, the RPAs may be modified in **Plans 1 and 2** but the area not reduced based on arboricultural reasoning. Such instances include the physical obstruction to root development or inhospitable rooting environments.

Height

An approximation of height in metres is provided for the highest point of each tree.

Canopy spread

This is taken at four cardinal points, to provide a representative account of the canopy spread.

Life stage

There are six classes to which trees are assigned:

Table A.1: Definition of ages classes

Age class	Description
Young	Newly planted within 0-10 years
Semi mature	A tree in the first third of its normal life expectancy for the species (significant potential for future growth).
Early mature	A tree in the second third of its normal life expectancy for the species (some potential for future growth).
Mature	A tree in the latter third of its normal life expectancy for the species (typically having reached its ultimate size).
Over mature	Beyond the normal life expectancy for the species.
Veteran	A tree that is of interest biologically, aesthetically or culturally because of its condition size and/or age.

Physiological condition

The trees physiological condition is classified as good, fair, poor or dead on the basis of leaf or bud density, taking note of signs of physiological stress.

Structural condition

Details of the trees structural condition are provided identifying structural defects and or signs of decay, pest and pathogens where present.

Proposed tree works

Whilst a formal tree inspection has not been undertaken the survey process does take into consideration implications for damage or injury to persons and/or property; recording defects and assessing the structural condition of those trees surveyed. Where necessary, tree works have been proposed within the tree schedule to mitigate potential hazards as part of proactive management of the tree stock with the aim of optimising the life expectancy of those trees surveyed.

Tree work priority codes

Priority codes from 1 to 3 have been given for those trees requiring tree works detailed in **Table A.2** below. The definition and level of urgency have been determined based on the perceived likelihood of failure and hazards posed to potential or actual targets.

Table A.2: Tree works priority codes

Priority Code	Description
Priority Code 1	An identified hazard considered to pose an imminent or serious risk to person or property in the context of the current land use. Works must be undertaken at the earliest possible opportunity.
Priority Code 2	Works considered necessary to mitigate a perceived hazard from an observed and recorded defect. These tree works should be undertaken prior to any development works commencing on site.
Priority Code 3	Considered to be general maintenance works which should commence post development but prior to residential occupancy.

Table A.3: Summary of Cascade Chart for tree quality assessment

Category and definition	Criteria
Category U	Those trees in such a condition that they that cannot be realistically retained as a living tree in the context of the current land use for longer than 10 years. If they cannot be safely retained as an ecological receptor following proposed remedial works, these trees should be removed for arboricultural reasons followed by appropriate replacement planting.
Category A (High quality of value)	Trees with an estimated life expectancy of at least 40 years. These trees may be of particular good example of their species or contribute an important visual landscape feature or provide significant historical/conservation value.
Category B (Moderate quality and value)	Trees with an estimated life expectancy of at least 20 years. These are trees that may be included within category A, but are downgraded due to the presence of significant but remedial defect. May also include trees present in such numbers that they form a distinctive landscape feature i.e. woodland, or tree of a material conservation/cultural value.
Category C (Low quality and value)	Trees with an estimated life expectancy of at least 10 years. Generally regarded as an unremarkable specimen of its species, or of such an impaired condition that they do not qualify for higher categories providing little landscape/conservation or cultural value.

Appendix 2: Existing Site Plan

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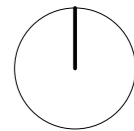
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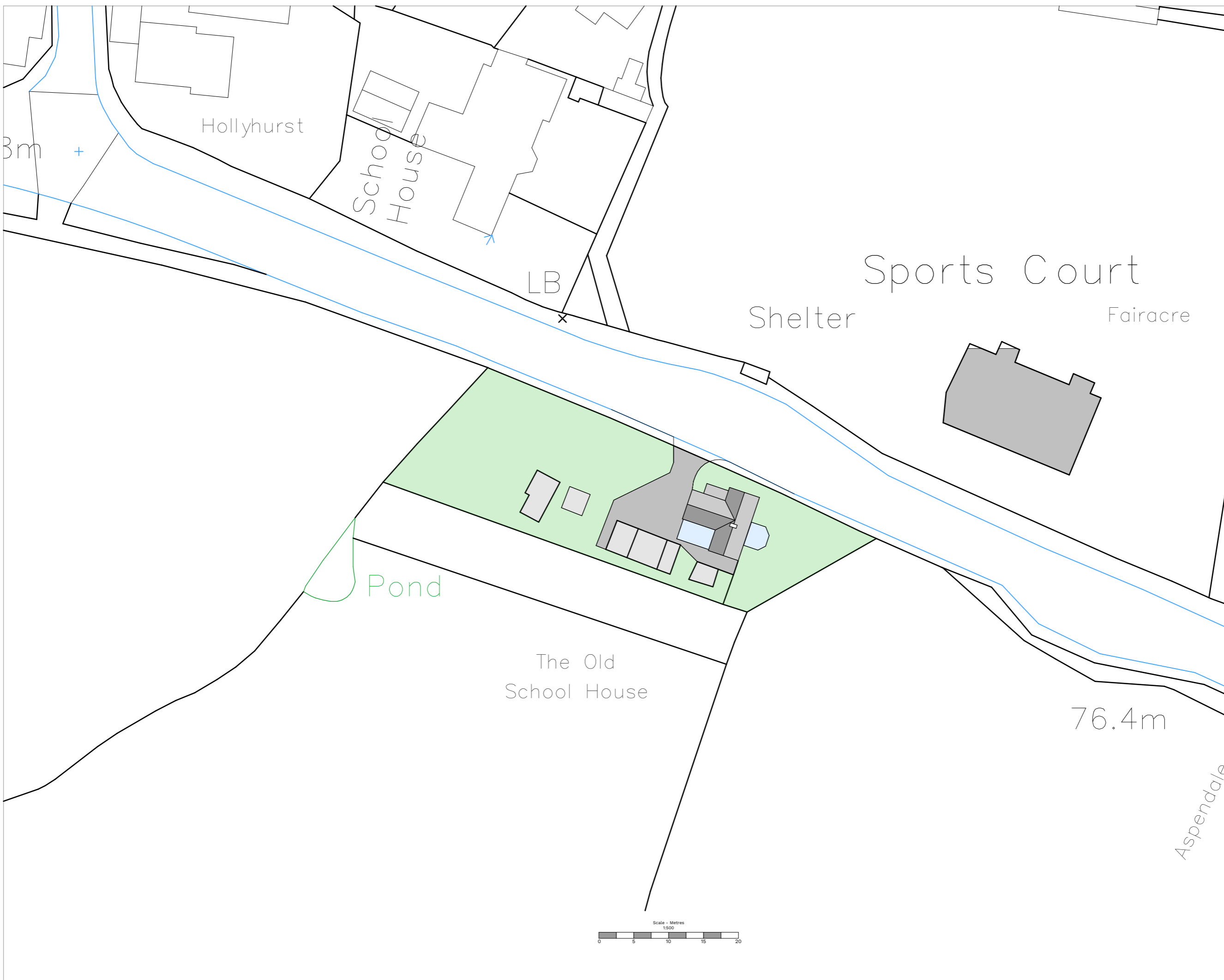
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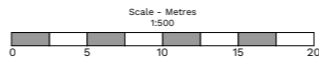
REV DESCRIPTION	DATE	BY	CHKD
ORIGINATING OFFICE			
BEECH HOUSE SHREWSBURY BUSINESS PARK SHREWSBURY SHROPSHIRE SY2 6FG			
			01743 27697 shrewsbury@berrys.uk.com www.berrys.uk.com

76.4m

Aspendale

BERRYS

STATUS: PLANNING			
CLIENT: Mrs. M. Quigley			
PROJECT: Extension and alterations to Old School House, Holyhead Road, Bicton, Shrewsbury, SY3 8EQ.			
DRAWING: Existing Site Plan			
SCALE @ A3: 1:500	AUTHOR: RC	CHKD BY:	DATE: 05.08.2022
DRAWING No: SA44442-BRY-ST-PL- A- 0002			REVISION:



Appendix 3: Statutory Controls

Tree Preservation Orders & Conservation Area

Written consent must be obtained from the local planning (LPA) authority prior to any works upon a tree subject of a Tree Preservation Order unless the tree is;

- Dead or dangerous
- Works are in line with an obligation under an Act of Parliament
- Permission has been granted through a Planning application

A six week notice to the LPA is required under Section 211 of the Town and Country Planning Act (1990) for any tree works within a Conservation area.

It is a criminal offence to cut down, uproot, wilfully destroy or deliberately damage a tree subject of a Tree Preservation Order. Under Section 210(2) of the Town and Country Planning Act (1990) anyone found guilty of the actions above are liable of a fine of up to £20,000 if convicted by a magistrates' court. In serious cases a person may be committed for trial in the Crown Court which will also consider any financial benefits which has or is likely to result from such an offence. In addition there is also a duty requiring landowners to replace a tree removed, uprooted or destroyed in contravention of a Tree Preservation Order.

Where full planning permission is authorised, the statutory obligations above are no longer applicable, transcended by the Town and Countryside Planning act (1990), which permits tree removal for the purpose of development.

Forestry Act 1987

A felling licence is required wherever an excess of 5 cubic metres of timber is felled per calendar quarter. Exceptions to the Forestry Act (1967) include felling trees which when measured at 1.3m above ground that have a stem diameter of 8cm or below. Other exceptions include thinning of woodland trees with a stem diameter of 10cm or below and coppicing of trees with a diameter of 15cm or below.

Exceptions are also afforded to work carried out by statutory undertakers; removal of dangerous and dead trees, prevention of abatement of a nuisance and to prevent the spread of quarantined pests or disease in response to a notice served by a Forestry Commission Plant Health Officer.

The Occupiers Liability Act 1957/1984

Land owners have a duty of care to ensure they have taken practice steps to ensure those trees within the curtilage of their property are reasonably safe for permitted visitors.

Highway Act 1980

The highway authority have the ability to issue a land owner a 14 days notice to carry out works upon tree or hedgerow that overhang a highway road or footpath which the public has access to as to endanger or obstruct the passage/sight lines of vehicles or pedestrians.

Protected species

All species of British bat are listed as a European Protected Species (EPS) on Schedule 2 of The Conservation of Habitats and Species Regulation (Amended) (EU Exit) (2019) which transpose the Habitats Directive making it an offence to:

- *Deliberately capture, injure or kill a wild animal of a EPS;*
- *Deliberately disturb wild animals of a EPS wherever they are occurring, particularly any disturbance which is likely to impair their ability to survive, to breed or reproduce, or in the case of hibernating or migratory species, to hibernate or migrate; or to affect significantly the local distribution or abundance of the species to which they belong;*
- *Deliberately take or destroy the eggs of a wild animal of a EPS; or*
- *Damage or destroy a breeding site or resting place of a wild animal of a EPS.*

Additional protection for bats is also afforded under the Wildlife and Countryside Act 1981 (as amended), making it an offence to intentionally or recklessly disturb bats whilst they are occupying a structure or place which is used for shelter or protection, or to obstruct access to this structure or place.

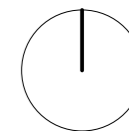
All wild birds, their nests and eggs are protected under Section 1 of the Wildlife and Countryside Act 1981 (as amended), this makes it an offence to:

- *Intentionally kill, injure or take any wild bird;*
- *Take, damage or destroy the nest of any wild bird while it is in use or being built;*
- *Take, damage or destroy the egg of any wild bird; or*
- *To have in one's possession, or control, any wild bird (dead or alive) or egg or any part of a wild bird or egg.*

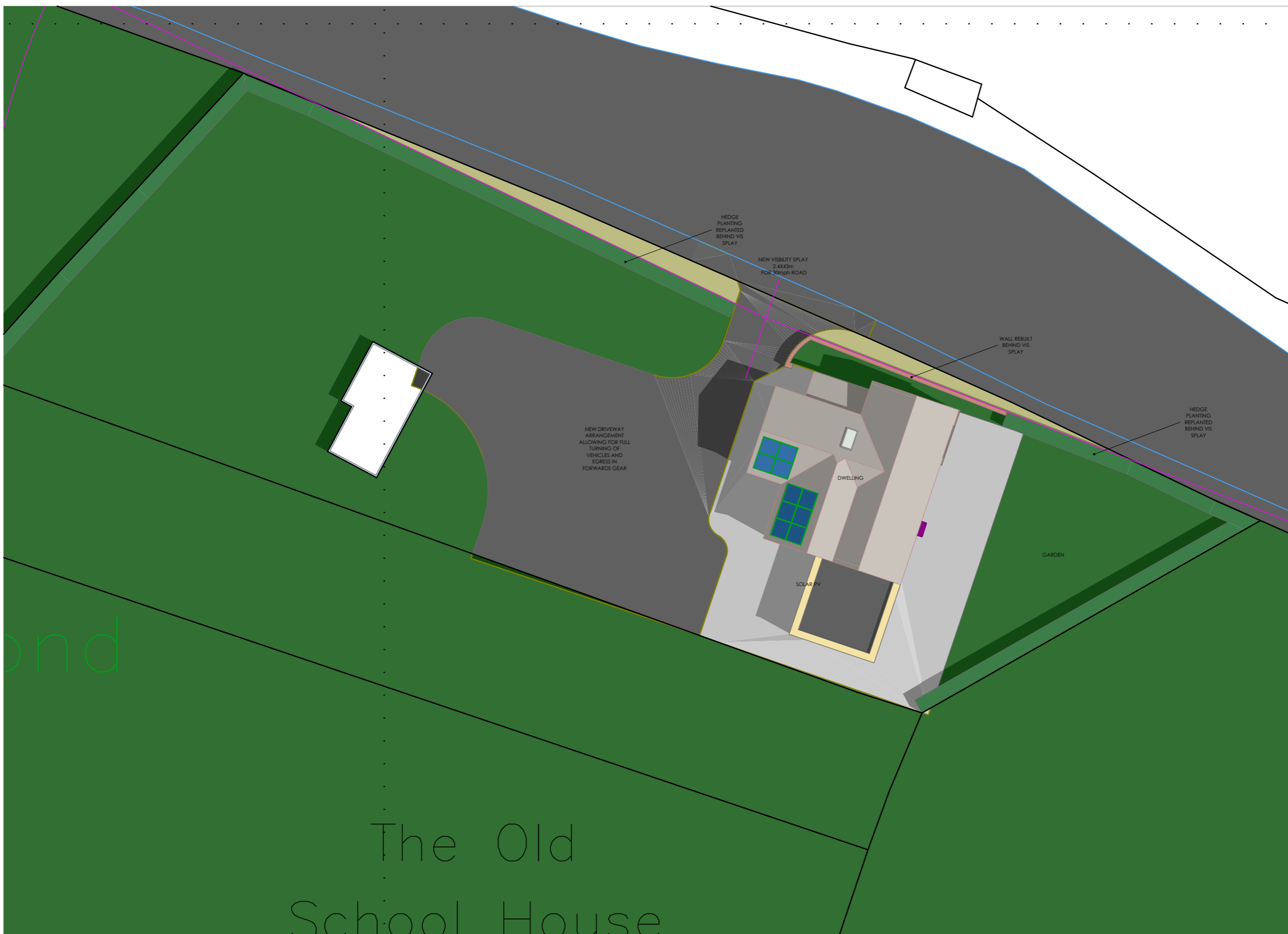
Appendix 4: Site Layout

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REV DESCRIPTION	DATE	BY	CHKD
B REDESIGN FOLLOWING PD APPLICATION.	26.07.23	RC	AB
A UPDATED FOR PD APPLICATION.	17.02.23	RC	AB

ORIGINATING OFFICE
 BEECH HOUSE
 SHREWSBURY BUSINESS PARK
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 01743 27697
 shrewsbury@berrys.uk.com
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BERRYS

STATUS: **PLANNING**

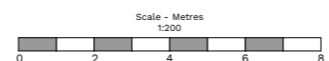
CLIENT: Mrs. M. Quigley

PROJECT: Extension and alterations to Old School House, Holyhead Road, Bicton, Shrewsbury, SY3 8EQ.

DRAWING: Proposed Site Plan

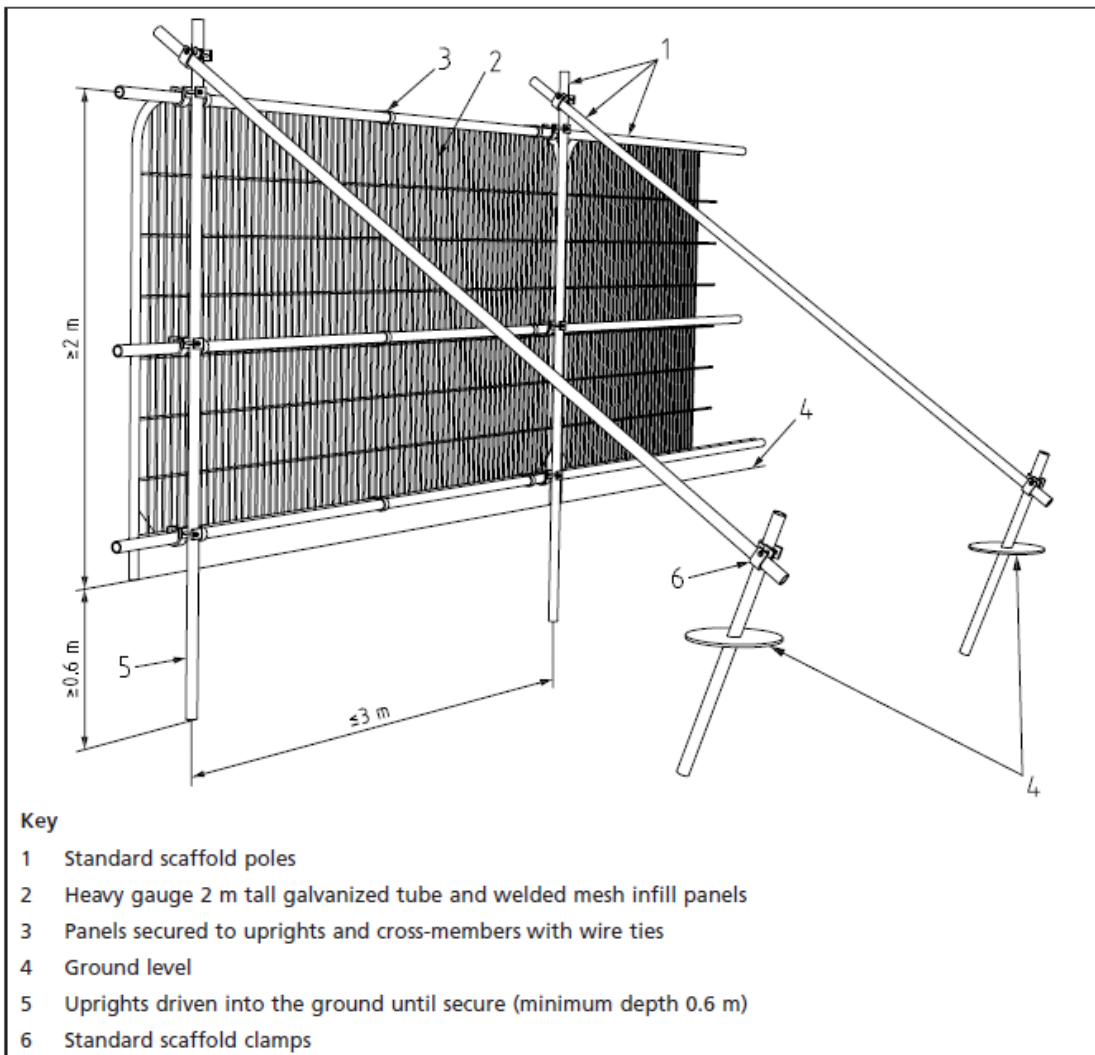
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 AUTHOR: RC
 CHKD BY:
 DATE: 05.08.2022

DRAWING No: SA44442-BRY-ST-PL- A- 0005
 REVISION: B

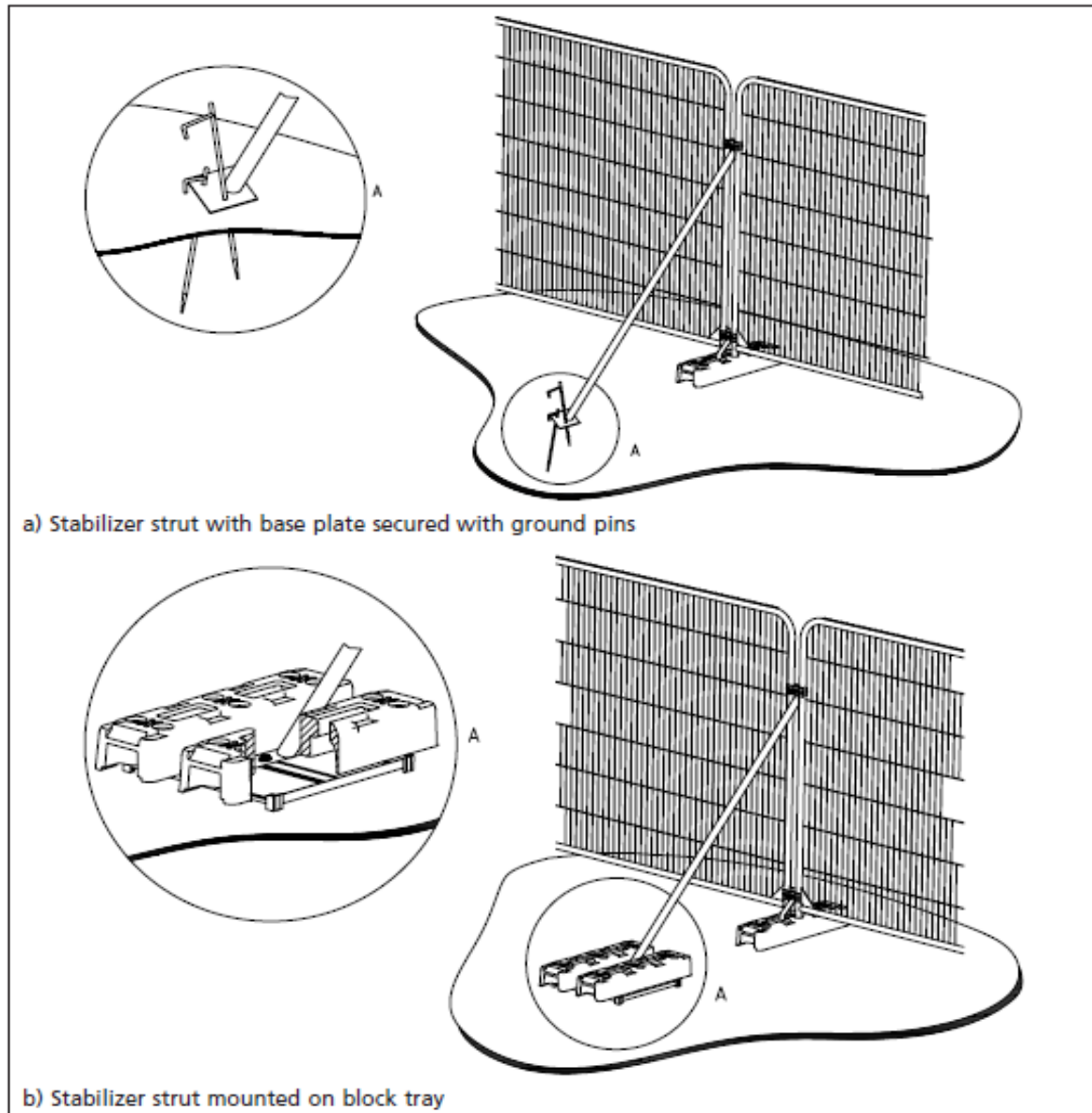


Appendix 5: Specification of protective barrier fencing

(Extract from BS 5837:2012, Figure 2)



Alternative options available for securing protective barrier fencing (Extract from BS 5837:2012, Figure 3)



Appendix 6: Specification of ground protection measures

(Extract from BS5837:2012)

6.2.3.2 Where the set-back of the tree protection barrier would expose unmade ground to construction damage, new temporary ground protection should be installed as part of the implementation of physical tree protection measures prior to work starting on site.

6.2.3.3 New temporary ground protection should be capable of supporting any traffic entering or using the site without being distorted or causing compaction of underlying soil.

NOTE The ground protection might comprise one of the following:

- a) *for pedestrian movements only, a single thickness of scaffold boards placed either on top of a driven scaffold frame, so as to form a suspended walkway, or on top of a compression-resistant layer (e.g. 100 mm depth of woodchip), laid onto a geotextile membrane;*
- b) *for pedestrian-operated plant up to a gross weight of 2 t, proprietary, inter-linked ground protection boards placed on top of a compression-resistant layer (e.g. 150 mm depth of woodchip), laid onto a geotextile membrane;*
- c) *for wheeled or tracked construction traffic exceeding 2 t gross weight, an alternative system (e.g. proprietary systems or pre-cast reinforced concrete slabs) to an engineering specification designed in conjunction with arboricultural advice, to accommodate the likely loading to which it will be subjected.*

6.2.3.4 The locations of and design for temporary ground protection should be shown on the tree protection plan and detailed within the arboricultural method statement (see 6.1).

6.2.3.5 In all cases, the objective should be to avoid compaction of the soil, which can arise from the single passage of a heavy vehicle, especially in wet conditions, so that tree root functions remain unimpaired.

Salopian Consultancy

doug@salopianconsultancy.co.uk
07939 947 631

Plan 1: Tree Constraints Plan

SCALE : 1 : 500 @ A4 DATE : 15/02/2024

MAP FILENAME : Old School House

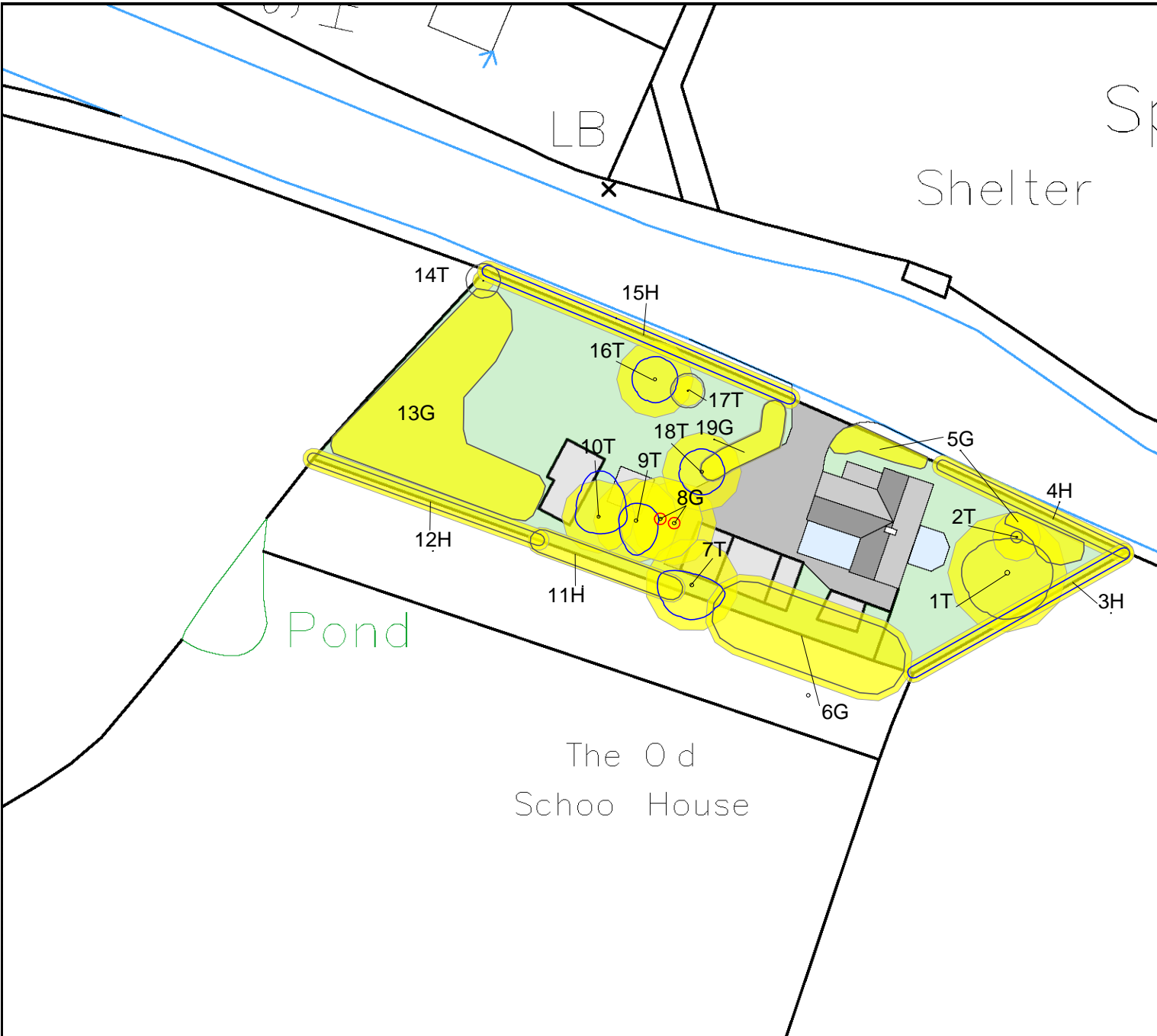


Tree Number

Root Protection Area

Crown Spread

Category 'A' Category 'B' Category 'C' Category 'U'



The Old School House

Pond

Shelter

LB

76.4

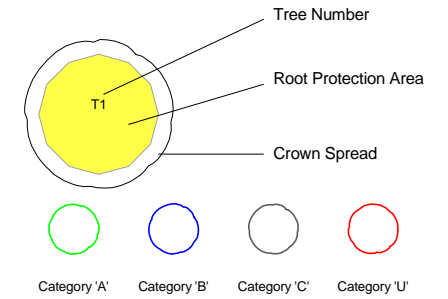
Plan 2: Tree Protection Plan

SCALE :
1 : 500 @ A4

DATE :
15/02/2024



MAP FILENAME :
Old School House



Arboricultural Impact Tree Protection Measures

- Construction Exclusion Zone
- Hand dig Methodology
- Tree/Hedgerow Removal
- Protective Barrier Fencing

Drawings Proposed Site Plan

SCALE @ A4:	DATE:	15/02/2024
1:500	15/02/2024	
DRAWING No:	PROJECT No:	
SA44442-BRY-ST-PL-A-0035		