

Tree Survey, Categorisation & Constraints Report

in accordance with
BS 5837:2012 (Survey Phase 4.4, 4.5 & 4.6)

At
Llanfabon Infants School
Nelson

On the instructions of
Caerphilly County Borough Council

Dated: October 2021. Revised May 2022 (Version 2)



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Approved by Mr. S J Ambler. Cert.Arb.(RFS), Tech.Arbor.A., Dip.Arb. (RFS), F.ARBOR.A.

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Signed Steve Ambler		Signed Vaughan Lewis	
Date	8 th June 2022	Date	8 th June 2022

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1. INTRODUCTION

Steve Ambler & Sons Tree Specialists Ltd are instructed by Mr. James Bennett (Senior Design Technician - Caerphilly County Borough Council), to undertake an arboricultural survey at Llanfabon Infants School, to assist in the submission of a planning application to the Local Planning Authority.

This survey is in accordance with the standards set out in BS 5837:2012¹ (items 4.4, 4.5 & 4.6) essentially to gather tree related information to assist the Local Planning Authority in their decision-making process, in the context of design, demolition and construction.

I have been provided with the following information -

- Topographical Survey (21576_A_1to200@A0)
- Llanfabon Infants Childcare Unit - PL00 & PL01 - Proposed Site Plan & Block Plan.

I understand there is a proposal to redevelop the site, however, the trees have been assessed objectively and without reference to the supplied block plan.

The weather conditions were favourable for a survey of this nature and conducted from ground level on the 20th of May 2022.

This is version 2 of the tree survey, with the client defining a larger area for surveying than originally undertaken in October 2021.

The inspection was conducted by Vaughan Lewis, our Arboricultural & Woodland Consultant, who has worked within the arboricultural and forestry sectors for 25 years, most recently as the Principal Arboricultural and Woodlands Officer for a local authority. Vaughan holds the following relevant qualifications: -

- a) Professional Technician in Arboriculture (Arboricultural Association)
- b) Professional Member of the Arboricultural Association
- c) Landscape Science, Higher National Diploma -Distinction. (Pencoed College (University of Glamorgan)
- d) Woodland Management, National Diploma - Distinction (Hereford College of Agriculture)
- e) Rural Studies, Btec First Diploma – Distinction (Pencoed College)
- f) Lantra Award, "Bats and Arboriculture – A Guide for Practitioners" developed by The Bat Conservation Trust.
- g) Professional Tree Condition Certificate (Lantra Awards)

This Tree Survey Report is approved by Steve Ambler who is the company founder and a professional arboriculturist with over 40 years' experience in the industry. His company was established in 1999 and later expanded during 2006 with the launch of a Specialist Tree Management section to become - Steve Ambler & Sons Tree Specialists Ltd. Steve holds the following arboricultural qualifications: -

- a) Fellow Member of the Arboricultural Association.
- b) Professional Diploma in Arboriculture (Royal Forestry Society)
- c) Professional Technician in Arboriculture (Arboricultural Association)

¹ British Standards Institute Publication "Trees in Relation to Design, Demolition and Construction - Recommendations" 2012

- d) Certificate in Arboriculture (Royal Forestry Society)
- e) LANTRA Award, "Bats and Arboriculture – A Guide for Practitioners" developed by The Bat Conservation Trust.

Unless otherwise stated, this Report remains valid for 12 months. Trees require frequent inspections and the next one is recommended within 12 months of the date of this Report.

2. SITE DESCRIPTION AND OBSERVATIONS

The site is situated centrally within the village of Nelson, near Trelewis, to the west of the Caerphilly County Borough boundary. It is situated within its own grounds and located within a residential area.

Houses immediately abut the site to the north-east and south-east. The access road forms the north-west boundary with the residential road of Cae Llwyndu to the south.

The survey area includes the school grounds and the area to the front (east) of the Nelson Community Centre.

Several planters and formal shrub beds were located within the car park and playground and due to the shrubs and small trees being of <75-mm stem diameter they were not recorded within the Findings Table in accordance with British Standard 5837. However, they have been annotated on the Tree Constraints Plan, located within the Appendices.

Ordnance Survey National Grid Reference: ST111954

Post Code: CF46 6HL

What3Words (access point): *glove.attitudes.zoomed*

The regional soil maps indicate the area typically has a wet, acidic, loamy soil and is located at an altitude of 159-m above sea level.

Trees envelope the school buildings to the periphery of the grounds in all directions. The tree cover is even aged and can no doubt be dated back to the original planting associated with the construction of the school. It comprises of small copses, hedgerows and individual specimens, of primarily native broadleaved species with the occasional non - native.

The treed grounds to the south and east are fenced out from the more formal school grounds with a 1.2-m high metal fence with gated access. This seems to provide a secure and safe environment, and I am advised the area is widely used for Forest School activities. It is this usage and the screening value that these trees offer for the surrounding housing, that provides the greatest amenity value.

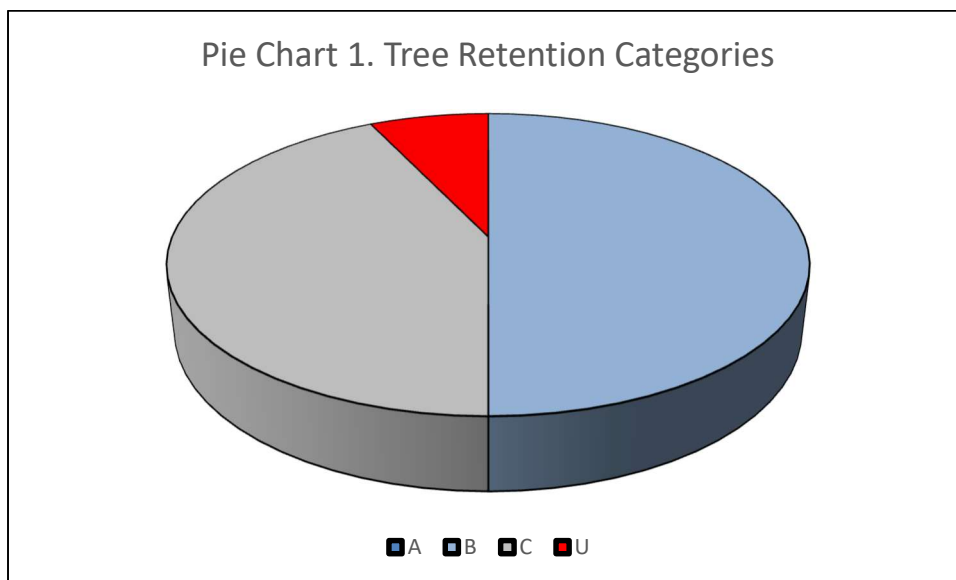
Tree Retention Categories.

Criteria.

Category A trees- Due to their size and prominent locations in the landscape and general good health and condition with a life expectancy above 40 years, the following category A trees are recorded on the site.

Category B - trees which are large and prominent in the locality and in general good health and condition with some minor defects, or groups which cohesively provide screening of views into or out of the site (or between parts of it).

The remaining trees are not considered to be of any particular arboricultural or visual merit, are below the threshold of 75- mm diameter when measured at 1.5 metres above ground level or are in poor condition and have been allocated retention categories C or U.



NOTE - Category C trees are of little merit and need not necessarily be a significant constraint on the site' s potential as their loss may be mitigated through planting.

3. SPECIES RECORDED

Listed in alphabetical order –

- Apple (*Malus* sp)
- Ash (*Fraxinus excelsior*)
- Bird cherry (*Prunus padus*)
- Blackthorn (*Prunus spinosa*)
- Common alder (*Alnus glutinosa*)
- Dog rose (*Rosa canina*)
- Downy birch (*Betula pubescens*)
- Elder (*Sambucus nigra*)
- Field maple (*Acer campestre*)
- Goat willow (*Salix caprea*)
- Hawthorn (*Crataegus monogyna*)
- Hazel (*Corylus avellana*)
- Holly (*Ilex aquifolium*)
- Horse chestnut (*Aesculus hippocastanum*)
- Norway maple (*Acer platanoides*)
- Silver birch (*Betula pendula*)
- Stag' s horn sumac (*Rhus typhina*)
- Sycamore (*Acer pseudoplatanus*)
- White willow (*Salix alba*)
- Whitebeam (*Sorbus aria*)
- Wild cherry (*Prunus avium*)

4. TREE SURVEY & TREE SURVEY PLAN

This tree survey will include each tree within the site boundary with a stem diameter of above 75-mm or in the case of large groups those measuring above 150-mm when measured at a height of 1.5-m above ground level. Trees over this size growing on land adjacent to the site, which are within a distance equal to 12 times their stem diameter from the boundary, are also included.

The surveyed tree/s are identified on the attached Tree Constraints Plan, within the Appendices, and the Schedule of Findings. This baseline data provides reference to an individual and the location of the tree using a tree reference number or tree tag number or both. Where tree tag number are used, a numbered tag is attached to the trunk of each tree at about 1.5-2.0 metres above ground level. A tabular format later in this Report records the baseline details of each tree or group against the reference number or numbered tag in the Findings tables Item 7.0.

The Report assigns the trees to one of four categories U, A, B, C (see Table One - Appendix A) depending on their overall health, size, condition, amenity, cultural and conservation value, their suitability in view of the increased usage that will arise following development. For trees in categories A to C, it should qualify under one or more of the three subcategories (1, 2, 3). Subcategories 1, 2, and 3 are intended to reflect arboricultural and landscape qualities, and cultural values, respectively. This system will also identify any unsuitable trees and suggest removal where necessary.

Where trees are found to require immediate attention, they will be identified in red bold text in the schedule of findings.

Care is needed when considering the quality and value of C grade and young trees, especially where they occur as individual specimens and should not dominate site layout considerations.

Trunk diameters are measured at 1.5 metres above ground level and rounded to the nearest 25 millimetres.

Trunk diameters and accessible crown spreads are measured with tree height, first significant branch and the lower crown ground clearance being estimated, unless otherwise stated.

NOTE - In all cases where a tree's position may be critical (e.g., in accurately determining clearances between a tree and a proposed structure) all dimensions should be checked on site.

5. TREE CONSTRAINTS PLAN

A Tree Constraints Plan accompanies this Report and identifies a 'Root Protection Area' (RPA) for each tree or group of trees surveyed. The RPA is in effect a layout design tool indicating the minimum area around a tree or group deemed to contain sufficient roots and rooting volume to maintain tree viability and stability, and in which the protection of the roots and soil structure is treated as a priority. Where a tree is to be retained, its RPA should be respected from the initial design period and throughout the demolition works until completion of the build. The necessary RPA distances are found in Table D1 of the British Standards¹.

The RPA is marked on the Tree Constraints Plan as a solid orange line and reflects a radial distance when measured from the centre of the tree's trunk which is shown as a circle, centred upon the trunk of the tree, to enclose an area equal to the required RPA. This measurement is replicated within the end column of the Schedule of Findings and again in tabular format and appears in the Tree Constraints Plan.

In practice, the distribution of roots may frequently prove to be uneven due to the presence of a variety of constraining influences. These may be physical barriers such as existing foundations etc., or the existence of localised soil conditions inhospitable to root growth, such as water logging or soil compaction. Conversely, soil conditions may be particularly conducive to root development in one quarter, and this might lead to an asymmetric distribution of roots around the tree. However, in most cases the nominal circular areas as indicated will provide a reasonable guide as to where special protection is needed.

Where pre-existing site conditions or other factors indicate that rooting has occurred asymmetrically, a polygon of equivalent area will be produced on the Tree Constraints Plan to represent this. Modifications to the shape of the RPA will reflect a soundly based arboricultural assessment of likely root distribution.

Proposed new planting may be marked on the plan as a constraint and the soil should be protected from compaction where this is to occur.

Trees will be coloured according to their category and the following will apply (Refer to 'Tree Quality Assessment' and Tree Constraints Plan in the Appendices).

- U - Dark red
- A - Light green
- B - Mid blue
- C - Grey

Planning Policy Wales 11 includes the following key paragraphs in relation to trees: -

4.1.1.9. Well-integrated green infrastructure, such as SUDS, street trees and verges, not only create a pleasant environment but can also achieve a range of other benefits, including pollutant filtering, urban cooling, water management and habitat creation. Such features should be included as part of a well-designed street layout.

6.2.1. Green infrastructure is the network of natural and semi-natural features, green spaces, rivers, and lakes that intersperse and connect places. Component elements of green infrastructure can function at different scales. At the landscape scale green infrastructure can comprise entire ecosystems such as wetlands, waterways, and mountain ranges. At a local scale, it might comprise parks, fields, public rights of way, allotments, cemeteries, and gardens. At smaller scales, individual urban interventions such as street trees, hedgerows, roadside verges, and green roofs/walls can all contribute to green infrastructure networks.

6.4.24 Trees, woodlands, copses and hedgerows are of great importance for biodiversity. They are important connecting habitats for resilient ecological networks and make a valuable wider contribution to landscape character, sense of place, air quality, recreation, and local climate moderation. They also play a vital role in tackling climate change by locking up carbon, and can provide shade and shelter, a sustainable energy source and building materials. The role, siting, and design requirements of urban trees in providing health and well-being benefits to communities, now and in the future should be promoted as part of plan making and decision taking.

6.4.25 Planning authorities should protect trees, hedgerows, groups of trees and areas of woodland where they have ecological value, contribute to the character or amenity of a particular locality, or perform a beneficial and identified green infrastructure function. Planning authorities should consider the importance of native woodland and valued trees, and should have regard, where appropriate, to local authority tree strategies or SPG. Permanent removal of woodland should

only be permitted where it would achieve significant and clearly defined public benefits. Where woodland or trees are removed as part of a proposed scheme, developers will be expected to provide compensatory planting.

6.4.26 Ancient woodland and semi-natural woodlands and individual ancient, veteran and heritage trees are irreplaceable natural resources, and have significant landscape, biodiversity, and cultural value. Such trees and woodlands should be afforded protection from development which would result in their loss or deterioration unless there are significant and clearly defined public benefits: this protection should prevent potentially damaging operations and their unnecessary loss. In the case of a site recorded on the Ancient Woodland Inventory, authorities should consider the advice of NRW. Planning authorities should also have regard to the Ancient Tree Inventory.

6.4.27 The protection and planting of trees and hedgerows should be delivered, where appropriate, through locally specific strategies and policies, through imposing conditions when granting planning permission, and/or by making Tree Preservation Orders (TPOs). They should also be incorporated into Green Infrastructure Assessments and plans.

6.7.3 Certain sounds, such as those created by trees, birds, or water features, can contribute to a sense of tranquillity whilst others can be reassuring because of their association with the normality of everyday activities.....

Technical Advice Note 12 Design (2016). This advice note states the response to context should not be confined to architectural finishes. It is important to help integrate old and new development and reinforce hierarchy between spaces through the consideration of retaining existing landmarks, mature trees and hedgerows within housing areas as well as introducing new planting appropriate to the area. The guidance notes that opportunity should be taken when improving the public realm to protect and enhance biodiversity and assist pollution abatement through careful design, implementation, and maintenance of planting. Planting, particularly large tree species can also be used to improve microclimate and reduce dust and the perception of noise through, shade, shelter, and screening.

In addition, following legislation applies -

The Town & Country Planning Act 1990.

Section 197 of the Act places an express duty on the local planning authority, when granting planning permission, to ensure whenever appropriate that adequate conditions are imposed to secure the preservation or planting of trees, and that any necessary tree preservation orders are made under section 198 of the Act. When granting outline planning permission, the authority may consider it appropriate to impose a condition requiring the submission of particular details relating to trees to be retained on the site, such as their location in relation to the proposed development and their general state of health and stability. When granting detailed planning permission, conditions may be used to secure the protection of trees to be retained, for example by requiring the erection of fencing around trees during development or restricting works which are likely to adversely affect them. The long-term protection of trees, however, should be secured by Tree Preservation Orders (TPO) rather than by condition: such orders may also be expedient for the temporary protection of existing trees until details of the reserved matters are submitted and it becomes clear whether there is a need to retain the trees.

The provision and acceptance of this report are subject to the general terms and conditions of Steve Ambler & Sons Tree Specialists Ltd, which can be made available upon request.

6. RECOMMENDATIONS

Your attention is drawn to the condition of tree numbers T3, T4, T24 and three trees tagged within Group 1. These trees are in a dangerous condition, and the remedial actions within the management recommendations of the Schedule of Findings must be immediately implemented.

Recommended tree condition inspection²: The whole site should receive a tree condition survey cyclically every 18 months.

Efforts should be made to retain category A and B trees.

C category trees may be retained if desired although not need necessarily be a significant constraint on the site' s potential.

Category U trees should be removed as part of any site development and evaluated through a site risk assessment in the sites existing current situation.

Design and layout should take account of existing trees of importance and consider their requirements to maintain existing landscape value where possible. The site layout should ensure construction activity is outside the Root Protection Area of any retained trees. Recommended minimum Root Protection Area radii are shown in the final column of the survey schedule and diagrammatically as circles on the Tree Constraints Plan.

ANY LANDOWNER OR LAND MANAGER SHOULD BE AWARE THAT - Trees must receive regular tree inspections by persons with adequate specialist arboricultural qualifications. A landowner has a duty of care imposed by statute and common law to do so and keep records of such (see legal constraints below). For further advice contact www.trees.org.uk

Tree felling and surgery works should only be undertaken by trained, competent and appropriately certificated personal with adequate experience and public, third party and employers liability insurance to 5,000,000 pounds. Always ask for proof from the contractors prior to engagement and seek references where necessary.

In view of the recommendations for the design and construction process, in considering tree care (Figure 1, Appendix A), further assessments are required throughout the planning and design phase and recommended as follows...

- (1) **Arboricultural Implications Assessment (AIA)**
- (2) **Tree Protection Plan (TPP),**
- (3) **Arboricultural Method Statement (AMS)** which should be undertaken by an 'Arboriculturalist' .

Tree clearance works or works other than those to deal with serious defects posing considerable risk shall not commence until such time written approval or full planning approval is received from the Local Planning Authority. Any authorised

² All instructions from our client to undertake the physical tree works recommended in Item 7 of this Report will not invoke the future recommended inspection or monitoring. This must be formerly instructed in writing, citing the date and full title of the Report, the exact recommended items instructed and provide tree references. No liability will be accepted where liabilities arise due to any absence in future monitoring, which is not instructed separately.

tree works should be completed prior to the onset of any demolition or construction works, taking account of all legal constraints.

All the retained trees should be re-examined by an arboricultural specialist, once the development is complete.

Where the installation of paths or lightweight structures such as walls are unavoidable near to trees, the design and construction specification needs to take account of future growth. Refer to Table A of the Standard.

Shading of buildings by trees can be a problem, particularly where there are rooms which require natural light. Buildings will need to be positioned further away than just the outer edge of tree canopies to reduce the likelihood of pressure from future occupiers for tree removal or trimming. This applies particularly where windows of habitable rooms will face onto tree canopies. Future dimensions of immature trees and shadow patterns should also be considered. A minimum of 2-m should be allowed between buildings and the outer edge of fully-grown canopies to allow for building maintenance and the erection of scaffolding etc.

Proposed buildings should be designed to take account of existing trees that are to be retained, their ultimate size and density of foliage, and the effect that these will have on the availability of light. Where sufficient distances (including allowances for future growth) cannot be achieved, the removal of C category trees should be considered. Larger trees are unlikely to increase greatly in height or spread. Older trees are particularly sensitive to root disturbance and are best retained within open space where they can be managed for optimum health, amenity value, and safety, rather than within private spaces.

All trees being retained must be protected by barriers and/or ground protection before -

- Any site activity, except for tree clearance.
- Materials or machinery are brought onto site.
- Demolition of any kind.
- Removal of surfaces.
- Stripping of soil.
- Stripping of vegetation.

Where all activity can be excluded from the RPA, vertical barriers should be erected to create a construction exclusion zone. Where construction activity cannot be fully or permanently excluded in this manner from all or part of a tree's RPA, appropriate ground protection should be installed (see 6.2.2 and Figure 2 of the standard) working under the guidance of an approved AMS and the supervision of the Project Arborist.

The default specification should consist of a vertical and horizontal scaffold framework, well braced to resist impacts, as illustrated in Figure 2 in the Appendices. The vertical tubes should be spaced at a maximum interval of 3 metres and driven securely into the ground. Onto this framework, welded mesh panels should be securely fixed. Care should be exercised when locating the vertical poles to avoid underground services and, in the case of the bracing poles, to avoid contact with structural roots. If the presence of underground services precludes the use of driven poles, an alternative specification should be prepared in conjunction with the project arboriculturist that provides an equal level of protection. Such alternatives could include the attachment of the panels to a free-standing scaffold support framework.

In order to prevent damage to the trees, including their roots, within the fenced area (RPA) there should be no...

- Alteration of ground levels, including soil stripping and digging.
- Installation of drainage or services using conventional open trenching methods which would not be in accordance with BS: 5837. (Any works should be in accordance with the National Joint Utilities NJUG Guidelines for the Planning, Installation and Maintenance of Utility Apparatus in Proximity to Trees Volume 4)
- Excavation (there are exceptions when covered by an approved³ Arboricultural Method Statement)
- Storage of any materials or equipment, even on a temporary basis.
- Storage of oil, bitumen, cement or other harmful materials, mixed or discharged within 12-m of the trunk of any retained tree and making further allowances for any slope of the ground to prevent running contamination. Phytotoxic materials would include any mineral oil, fuels, cement mortar washings concrete washings, mortar.
- Fires must not be lit beneath or within 12-m of any tree canopies.
- Site operations such as - deliveries, site machines, crane jibs etc (should be organised to avoid damaging the trunk or crown of trees). Where this conflict is unavoidable, then facilitation pruning should be carried out in advance, rather than after damage has occurred. This may also be required to allow demolition operations. (Facilitation pruning will require the consent of the LPA and should be under the guidance of the PA.
- Mechanical cultivation of the soil as part of landscaping operations.

Tree felling and surgery may be required to allow access for construction or future site traffic, or in the interests of the future health and safety. Detailed recommendations for such works can be provided once a final site layout is agreed and it is determined which trees (if any) are to be retained. All surgery should comply with the British Standards 3998:2010 Tree Work Recommendations or more recently accepted arboricultural good practice. The legal position regarding site designations should be considered.

³ Approved by the Local Planning Authority

7. SCHEDULE OF FINDINGS

Tree No	Tree Tag	Species	Height (m)	Effectual Diameter (mm)	Crown Spread				Lowest Branch	Canopy Clearance (m)	Life Stage	General Observations	Preliminary Management Recommendations	Remaining Contribution (years)	Retention Category	RPA Area	RPA Radius	Photo Ref
					N	E	S	W										
G1	NA	Silver birch, ash, sycamore, white willow, horse chestnut, field maple, elder, hazel, bird cherry, whitebeam, apple, common alder, holly, Norway maple	15.0	325	7.0	7.0	5.0	5.0	2	2.0	Early Mature	Even aged broadleaved plantation of mostly native species with the occasional non-native specimen. Provides a forest school type setting. Offers screening to and from site from the adjoining houses. Ash equates to approximately 15-20% of the species composition. Ash dieback disease (<i>Hymenoscyphus fraxineus</i>) Health Stage 1-4. Those in Health Stage 3,4 have been tagged. Branches touching gable end of house along the south boundary.	Fell trees with tags -344, 345, 560. Tip back branches to live growth points, in order to clear the gable end of the house, by 2-m. Inspect the stand of trees annually in the summer to review development of Ash dieback disease.	40+	B 2,3	48	3.9	1
G2	NA	Field maple, whitebeam, sycamore, wild cherry, hawthorn	14.0	375	5.0	6.0	5.0	5.0	2	2.0	Early Mature	Small group of even aged, planted trees of average form.	Tag 350. Cherry - Monitor fork union every 18 months.	40+	B 2,3	64	4.5	4

Tree No	Tree Tag	Species	Height (m)	Effectual Diameter (mm)	Crown Spread				Lowest Branch	Canopy Clearance (m)	Life Stage	General Observations	Preliminary Management Recommendations	Remaining Contribution (years)	Retention Category	RPA Area	RPA Radius	Photo Ref
					N	E	S	W										
											<p>Located on a triangular area of grass, that gently descends from the car park.</p> <p>Provides screening to and from site. Compression fork developing on cherry Tag 350.</p>							
G3	NA	Ash with evergreen ornamental shrubs.	6.0	100	2.0	2.0	2.0	2.0	0	0.0	Early Mature	Formal, ornamental bed with self-seeded ash. Branches foul car park lighting column.	Prune to clear lighting column	20-40	C 2	5	1.2	/
G4	1869-1870	Field Maple (<i>Acer campestre</i>)	7.0	240	3.0	3.0	3.0	3.0	2(W)	2.0	Semi Mature	Larger specimens growing out of hedgerow between school and densely vegetated area. Western stems growing within 5mm of fence posing a future management concern.	No action required	10-20	C.2	25	2.8	

Tree No	Tree Tag	Species	Height (m)	Effectual Diameter (mm)	Crown Spread				Lowest Branch	Canopy Clearance (m)	Life Stage	General Observations	Preliminary Management Recommendations	Remaining Contribution (years)	Retention Category	RPA Area	RPA Radius	Photo Ref
					N	E	S	W										
G5	1875 1877 1878	Rowan, Field Maple, Cultivar Apple	9.0	400	4.0	4.0	4.0	4.0	0.5(W)	0.5	Early Mature	Group of trees at southern end of grass area. Generally of good form. Providing amenity value for school and parking area.	No action required	20-40	B2	72	4.8	/
G6	N/A	Oak, Cultivar Apple	7.0	200	4.0	4.0	4.0	4.0	2.5(NW)	1.5	Young	Young trees forming a wooded area next to the school, with self-seeded sycamore. In conjunction with G7 they provide a small forest school type setting to the south.	No action required.	40+	C2,3	18	2.4	/
G7	1887- 1888	Cultivar Apple, Sycamore	10.0	460	5.0	5.0	5.0	5.0	2(E)	1.5	Mature	Group of larger more established trees making up a wooded area joined on to G6. In conjunction with G6 they provide a small forest school type setting to the south.	No action required	20-40	B2,3	17	5.5	/

Tree No	Tree Tag	Species	Height (m)	Effectual Diameter (mm)	Crown Spread				Lowest Branch	Canopy Clearance (m)	Life Stage	General Observations	Preliminary Management Recommendations	Remaining Contribution (years)	Retention Category	RPA Area	RPA Radius	Photo Ref
					N	E	S	W										
W1	1889-190	Silver Birch, Crack Willow, Whitebeam, Sycamore, Wild Cherry, Common Ash	12.0	400	3.0	3.0	3.0	3.0	2(N)	2.0	Early Mature	Woodland growing along southern boundary of school, providing good screening value from the adjacent road and housing estate. Ash trees in group are showing possible signs of Ash Dieback Disease (<i>Hymenoscyphus fraxineus</i>) health stage 1-2. Dense bramble cover at ground level made detailed inspections of tree bases impossible.	Monitor crown health of ash trees in group annually throughout summer months to assess for the development of Ash Dieback Disease	20-40	B2	72	4.8	/
W2	N/A	Silver Birch, Goat Willow, Crack Willow	4.0	100	1.0	1.0	1.0	1.0	1(S)	1.0	Young	Young trees growing adjacent to the boundary on the opposite side of the fence, providing good screening value from the road.	No action required.	20-40	C2	5	1,2	/

Tree No	Tree Tag	Species	Height (m)	Effectual Diameter (mm)	Crown Spread				Lowest Branch	Canopy Clearance (m)	Life Stage	General Observations	Preliminary Management Recommendations	Remaining Contribution (years)	Retention Category	RPA Area	RPA Radius	Photo Ref
					N	E	S	W										
W3	1893-1894	Pedunculate Oak, Hazel, Common holly	10.0	200	1.0	3.0	4.0	3.0	1.5(S)	1.5	Mature	Dense woodland growing on the boundary, providing good screening value. Two dead trees are just visible between T23 and T24.	Remove dead trees.	20-40 Years	B2	18	2.4	/
H1	NA	Hawthorn, holly, hazel, field maple, white willow	2.0	125	1.0	1.0	1.0	1.0	0	0.0	Early Mature	Dense, native hedge along the south boundary adjoining housing. Formally box cut, but has since been left to grow up where it occurs alongside group 1.	Continue to box cut twice annually, outside of the bird nesting season (March-August).	40+	B 2,3	7	1.5	/
H2, H3	NA	White willow, hazel, goat willow, field maple, blackthorn, holly, dog rose	6.0	250	2.0	2.0	2.0	2.0	0	0.0	Early Mature	Native hedge permitted to grow out. The willow element is multi-stemmed and slender. H2 - located on the school side of the metal palisade boundary fence to east of main entrance. H3 – is a continuation of H2, but located outside of the metal palisade fence of the school boundary and the chain link fence along the path that surrounds the side of the school.	Consider reducing the height to create a formally maintained hedge. Consider hedge laying.	20-40	B 2,3	28	3.0	5

Tree No	Tree Tag	Species	Height (m)	Effectual Diameter (mm)	Crown Spread				Lowest Branch	Canopy Clearance (m)	Life Stage	General Observations	Preliminary Management Recommendations	Remaining Contribution (years)	Retention Category	RPA Area	RPA Radius	Photo Ref
					N	E	S	W										
											Side pruning occurs regularly along the path to keep it accessible..							
H4	1881 to 1882	Crack Willow, Field Maple, Hazel	2.0	200	0.5	0.5	0.5	0.5	0.5(E)	0.5	Mature	The trees at either end of hedge have been tagged. Hedge between school and the road provides good screening value. Some stems within the hedge are of poor structural condition and are only viable as part of a maintained hedge, thereby keeping their size relatively small.	Continue to box cut twice annually, outside of bird nesting season (March-August).	20-40	B2	18	2.4	/
H5	1883-1884	Field Maple, Crack Willow, Common Hawthorn	2.0	200	0.5	0.5	0.5	0.5	0.5(W)	0.5	Mature	Hedge between school and densely vegetated area. The trees at either end of hedge have been tagged. Provides minimal screening value with an abundance of vegetation on the other side of the fence providing notable screening. Some stems within the hedge are of poor structural condition and are only viable as part of a maintained hedge.	continue to box cut twice annually outside of nesting bird season (March-August)	20-40	C2	18	2.4	/

Tree No	Tree Tag	Species	Height (m)	Effectual Diameter (mm)	Crown Spread				Lowest Branch	Canopy Clearance (m)	Life Stage	General Observations	Preliminary Management Recommendations	Remaining Contribution (years)	Retention Category	RPA Area	RPA Radius	Photo Ref
					N	E	S	W										
T1	NA	Downy birch	10.0	150	3.0	1.0	1.0	1.0	2	2.0	Semi Mature	Subordinate to tree 2 and of below average form.	None	20-40	C 2,3	10.	1.8	/
T2	346	Ash	16.0	400	4.0	4.0	5.0	4.0	3	4.0	Early Mature	Tree of average form. Ash dieback disease (<i>Hymenoscyphus fraxineus</i>) – Health Stage 1	Monitor crown health during growing season, annually	20-40	B 2,3	72	4.8	/
T3	347	Wild cherry	15.0	450	4.0	5.0	7.0	3.0	4	4.0	Early Mature	Tree of average form. Compressive main union at 2-m AGL, with a 1-m long, raised rib formation to the east and a sharply profiled, but unpronounced rib to the south. The east rib leads to a column of reaction wood in response to this structurally weak union, extending to the enlarged buttress at the base. Bacterial canker of cherry (<i>Pseudomonas syringae pv. morsprunorum</i>) is noted.	Fell to ground level.	<10	U	0	0.0	2

Tree No	Tree Tag	Species	Height (m)	Effectual Diameter (mm)	Crown Spread				Lowest Branch	Canopy Clearance (m)	Life Stage	General Observations	Preliminary Management Recommendations	Remaining Contribution (years)	Retention Category	RPA Area	RPA Radius	Photo Ref
					N	E	S	W										
T4	348	Ash	15.0	450	4.0	5.0	7.0	3.0	4	4.0	Early Mature	Ash dieback disease (<i>Hymenoscyphus fraxineus</i>) – Health Stage 2/3. Rigid movement associated with brittleness in the upper crown, under wind loading. Located on boundary with housing.	Fell to ground level.	<10	U	0	0.0	3
T5	NA	Wild cherry	13.0	400	6.0	6.0	7.0	3.0	3	1.0	Early Mature/ Mature	Twin stemmed, codominant specimen, with a tight main fork formed at 1-m AGL. The south fork soon forks again to form 3 stems, the central one of which has a compressive union at 2-m AGL, but afforded the dampening effect from wind loading by its neighbouring stems. Mower damage noted on north-west structural root. Bacterial canker of cherry (<i>Pseudomonas syringae pv. morsprunorum</i>) is noted.	Monitor fork unions every 18 months.	20-40	B 2	72	4.8	/

Tree No	Tree Tag	Species	Height (m)	Effectual Diameter (mm)	Crown Spread				Lowest Branch	Canopy Clearance (m)	Life Stage	General Observations	Preliminary Management Recommendations	Remaining Contribution (years)	Retention Category	RPA Area	RPA Radius	Photo Ref
					N	E	S	W										
T6	349	White willow	10.0	150	5.0	5.0	5.0	5.0	2	0.0	Early Mature	Multi-stemmed specimen, derived from stool. The stems are slender, and the species is inherently structurally weak, and as such one stem has fractured and failed. One small diameter stem is dead. Brambles dominates the vegetation under the crown, as with tree 8.	Coppice at 300-mm . The RPA can be considered for adjustment in consultation with a qualified arborist, if coppice works are undertaken and it causes a significant constraint to development.	10-20	C 2	10.	1.8	/
T7	NA	Ash	12.0	225	3.0	3.0	3.0	3.0	2	2.0	Semi Mature	Self-seeded twin specimen of average form, forking at 1-m AGL. Possible AGG HS 1	Monitor crown health during growing season	20-40	C 2	22.	2.7	/
T8	1864	Whitebeam	8.0	390	4.0	4.0	2.0	4.0	2(NE)	1.5	Mature	Tree of good form growing on grassy area, next to car park. Provides some screening value from the road and amenity value within the car park.	No work required.	40+ years	B2	69	4.7	/

Tree No	Tree Tag	Species	Height (m)	Effectual Diameter (mm)	Crown Spread				Lowest Branch	Canopy Clearance (m)	Life Stage	General Observations	Preliminary Management Recommendations	Remaining Contribution (years)	Retention Category	RPA Area	RPA Radius	Photo Ref
					N	E	S	W										
T9	1865	Sycamore	9.0	420	4.0	4.0	4.0	4.0	3(N)	2.0	Early Mature	Tree of good form in grass area, next to car park. Provides some screening and amenity value, along with its neighbouring trees.	No action required	40+	B2	79	5.0	/
T10	1866	Common Hawthorn	4.0	210	2.0	2.0	2.0	2.0	1(E)	1.5	Mature	Tree of below average form with the western side of crown slightly suppressed by the surrounding trees. Crown proximity to parking spaces is a possible future management concern.	No action required.	10-20	C2	20	2.5	/
T11	1867	Whitebeam	6.0	250	2.0	3.0	3.0	3.0	1.5(E)	1.5	Semi Mature	Tree of good form on grass verge, providing screening value from the road and amenity value within the school grounds and parking area.	No action required	20-40	B2	28	3.0	/
T12	1868	Wild Cherry	9.0	220	2.0	2.0	2.0	2.0	2(NW)	2.0	Semi Mature	Tree of average form growing on grass area next to car park.	No action required.	20-40	B2	21	2.6	/

Tree No	Tree Tag	Species	Height (m)	Effectual Diameter (mm)	Crown Spread				Lowest Branch	Canopy Clearance (m)	Life Stage	General Observations	Preliminary Management Recommendations	Remaining Contribution (years)	Retention Category	RPA Area	RPA Radius	Photo Ref
					N	E	S	W										
T13	1871	Field Maple	7.0	200	4.0	4.0	4.0	4.0	3(W)	4.0	Semi Mature	Standard tree growing out of hedgerow (H5), between school and densely vegetated area.	No action required	10-20	C2	18	2.4	/
T14	1872	Field Maple	5.0	280	4.0	1.0	4.0	4.0	3(W)	4.0	Semi Mature	Standard tree growing out of hedgerow (H5) between school and densely vegetated area. Western stems are in contact with the boundary fence	Consider reducing height to match height of hedgerow and manage as part of hedge in the future.	10-20	C2	36	3.4	/
T15	1872	Field Maple	7.0	320	4.0	4.0	4.0	4.0	3(W)	4.0	Semi Mature	Larger tree growing out of hedgerow (H5), between school and densely vegetated area.	No action required	20-40	C2	45	3.8	/

Tree No	Tree Tag	Species	Height (m)	Effectual Diameter (mm)	Crown Spread				Lowest Branch	Canopy Clearance (m)	Life Stage	General Observations	Preliminary Management Recommendations	Remaining Contribution (years)	Retention Category	RPA Area	RPA Radius	Photo Ref
					N	E	S	W										
T16	1876	Wild Cherry	9.0	500	3.0	3.0	3.0	3.0	2(E)	2.0	Mature	<p>Generally of good form.</p> <p>Mechanical damage to north side of base, with wound wood beginning to occlude the affected area. A basic resonance test with a sounding hammer shoes found no obvious signs of significant decay in this region..</p> <p>The low north-east limb has an area of dysfunction at 2-m AGL along its length and at 3-m, following an abrupt angle change (Bacterial canker of cherry - <i>Pseudomonas syringae pv. morsprunorum</i>). Reaction wood growing around area characterised by an asymmetrical branch cross section.</p>	<p>Monitor base every 24 months to assess for signs of decay around wound.</p> <p>Remove damaged north-east branch</p>	20-40	B2	113	6.0	/
T17	1879	Sycamore	8.0	390	4.0	4.0	4.0	4.0	3(W)	3.0	Early Mature	<p>Tree of average form growing in grass area.</p> <p>Mechanical damage noted on north-side of base, with wound wood forming.</p>	Monitor wound at base every 2 years for signs of developing decay.	40+	C2	69	4.7	/

Tree No	Tree Tag	Species	Height (m)	Effectual Diameter (mm)	Crown Spread				Lowest Branch	Canopy Clearance (m)	Life Stage	General Observations	Preliminary Management Recommendations	Remaining Contribution (years)	Retention Category	RPA Area	RPA Radius	Photo Ref
					N	E	S	W										
T18	1880	Cultivar apple	4.0	210	2.0	2.0	2.0	2.0	2(SE)	2.0	Semi Mature	Tree of good form growing in grass area. Provides ornamental amenity value.	No action required	20-40	C2	20	2.5	/
T19	1885	Bird Cherry	5.0	170	3.0	3.0	3.0	3.0	2(W)	2.0	Semi Mature	Isolated tree growing in the children's play area. Feature tree that enhances the play area, providing shade etc. as evident by the fact that the school have placed seating around the base.	No action required	20-40	C2	13	2.0	/
T20	1886	Goat Willow	9.0	280	4.0	4.0	1.0	4.0	3(N)	0.5	Early Mature	Multi stemmed specimen. Growing as part of a wooded area near the boundary of the school. Of average form for the species and less attractive in terms of amenity value, compared with the surrounding trees.	No action required.	20-40	C2	36	3.4	/
T21	1891	Field Maple	8.0	400	4.0	4.0	4.0	4.0	2(W)	2.0	Mature	Tree of good form and crown health, next to the boundary providing screening from neighbouring properties.	No action required	20-40	B	72	4.8	/

Tree No	Tree Tag	Species	Height (m)	Effectual Diameter (mm)	Crown Spread				Lowest Branch	Canopy Clearance (m)	Life Stage	General Observations	Preliminary Management Recommendations	Remaining Contribution (years)	Retention Category	RPA Area	RPA Radius	Photo Ref
					N	E	S	W										
T22	1892	Wild Cherry	7.0	330	4.0	4.0	4.0	4.0	2(W)	1.5	Mature	Tree of good form on boundary, providing screening value from neighbouring property.	No action required.	20-40	B2	50	4.0	/
T23	1895	Pedunculate Oak	12.0	510	5.0	5.0	5.0	5.0	2(SE)	0.5	Mature	Large tree of reasonable form on boundary, providing good screening value. The eastern stem has a cavity, measuring 100-mm x 400-mm x 50-mm deep, on the tension side of the stem, at 1-m AGL. Wound wood is forming around the cavity. Very low target occupancy at present.	Monitor decay development in eastern stem. Re-evaluate risk if target occupancy increases to the south, following any proposed development.	40+	B2	117	6.1	/
T24	1896	Pedunculate Oak	12.0	0	3.0	3.0	3.0	3.0	0(S)	0.0	Mature	Significant area of decay around basal union, resulting in declined crown health. The northern stem is dead. No signs of wound wood formation around decayed area, peeling bark and physiological dysfunction within the basal area, throughout.	Fell to ground level.	<10	U	0	0.0	6, 7

Tree No	Tree Tag	Species	Height (m)	Effectual Diameter (mm)	Crown Spread				Lowest Branch	Canopy Clearance (m)	Life Stage	General Observations	Preliminary Management Recommendations	Remaining Contribution (years)	Retention Category	RPA Area	RPA Radius	Photo Ref
					N	E	S	W										
T25	1897	Goat Willow	8.0	560	6.0	6.0	6.0	6.0	1(N)	1.0	Mature	Multiple slender stems derived from a congested, high coppice stool with tight unions. The outer stems notably leans at an angle of <45 degrees. Signs of poor attachment unions and dysfunction.	Re-coppice to 0.5m AGL. RPA can be adjusted as required following coppice operations under guidance of qualified arborist.	10-20	C2	141	6.7	/
T26	N/A	Pedunculate Oak	10.0	500	6.0	6.0	6.0	6.0	4(W)	1.0	Mature	Oak tree located in neighbouring property but within potential influencing distance. Provides screening value between sites. Tree of reasonably good form, suppressed by T27 on the south-east side. Stem diameter estimated at distance from site side.	No action required.	20-40	B2	113	6.0	/
T27	N/A	Common Beech	15.0	800	1.0	6.0	6.0	6.0	4(NW)	4.0	Mature	Large tree of good form, located in neighbouring property, with its crown overhanging the site. Stem diameter estimated at distance from site side.	No action required.	20-40	B2	290	9.6	/

Tree No	Tree Tag	Species	Height (m)	Effectual Diameter (mm)	Crown Spread				Lowest Branch	Canopy Clearance (m)	Life Stage	General Observations	Preliminary Management Recommendations	Remaining Contribution (years)	Retention Category	RPA Area	RPA Radius	Photo Ref
					N	E	S	W										
T28	N/A	Silver Birch	8.0	300	3.0	3.0	3.0	3.0	2(NW)	2.0	Early Mature	Tree of average form growing next to footpath. Low prominence within the wider area, and only really visible from the footpath.	No action required.	10-20	C2	41	3.6	/
T29	1898	Stag' s horn sumac	3.0	75	1.5	2.5	2.0	1.5	1.5(E)	1.5	Semi Mature	Tree of average form next to car park. Eastern and north-eastern branches overhang car park by 0.5-m	No action required.	20-40 Years	C	3	1.0	/
T30	1873	Field Maple	10.0	400	4.0	4.0	4.0	4.0	4(E)	4.0	Early Mature	Twin stemmed specimen diverges at 0.4m AGL. Low, developing compression fork has some broad, rounded reaction growth, 120-mm across and pronounced by 80-mm, extending 200-mm below each side of union.	Monitor basal union every 18 months for development of compression fork.	20-40 Years	C	72	4.8	/

NOTES.

- Tree felling should only be undertaken by trained, competent and appropriately certificated personal with adequate experience and public liability insurance to £5,000,000. Always ask for proof from the contractors prior to engagement and seek references where necessary.
- Trees must receive regular tree inspections by persons with adequate specialist qualifications. For further advice contact www.trees.org.uk

8. LEGAL CONSTRAINTS

Tree Preservation Orders and Conservation Area Status in Wales

In Wales, the law on TPOs is in Part V111 of the Town and Country Planning Act 1990 Town and Country Planning (Trees) Regulations 1999. When any tree/s are protected by a TPO or are situated within a Conservation Area, it is an offence (1) cut down (2) uproot (3) top (4) lop (5) wilfully damage or (6) wilfully destruct a tree without the express written permission from the Local Planning Authority (LPA), there are exceptions. An LPA may grant permission, if considered reasonable following the submission of an application for consent to undertake the works, or where in accordance with an Approved Planning Application or under the exemptions within the Town and Country Planning Act 1990 of dead, dying, or dangerous. It is advisable to consult the LPA and an Arborist prior to conducting any tree works under these exemptions.

Felling License

A Felling Licence may be required in certain felling operations, and these are administered by the Forestry Commission where more than five cubic metres of wood are felled in one calendar quarter and when selling more than two cubic metres. There are exceptions, and these are in the Forestry Act 1967 and Regulations made under this Act. Contravention of the felling licence controls can incur substantial penalties. Tree felling forming part of a Local Authority Planning Approval is exempt.

Tree work operations have the potential to impact on protected species, most notably birds and bats. **The Wildlife and Countryside Act 1981** is the primary legislation which protect birds in the UK, and it is an offence, with certain exceptions, to intentionally kill, injure or take any wild bird, or intentionally take, damage or destroy the nest of any wild bird while it is in use or being built or take or destroy an egg of any wild bird. Certain species of bird are afforded additional protection, whereby it is an offence to intentionally or recklessly disturb any wild bird included on Schedule 1 of the Act, while it is nest building or at a nest containing eggs or young or disturb the dependent young of such a bird.

It is not an offence to fell trees during the bird nesting period (which is generally considered to be between mid-February and September inclusive) providing it is done so without breaching the legislation detailed above.

Caution must be aired if tree works are programmed during the nesting season as there is potential for delay if nesting birds are found on site. Should nesting birds be present, then all but essential works must be postponed. If in undertaking essential works a nest or nests are found to be present, then further advice must be sought from the statutory nature conservation authority, which in Wales is Natural Resources Wales and in England is Natural England, or from an appropriately qualified ecologist. The penalty for disturbing or destroying one bird or nest can be an unlimited fine and up to six months in prison, or both.

Bats...Summary of Current Relevant Legislation

Bats are also generally associated with trees and can be impacted by tree work operations. There are some 17 species of bat which are known to breed in the British Isles, all are insectivorous and depend to some extent on habitat in which trees are a significant element. Bats are a protected species and are in decline both globally and nationally. Therefore, they are to be fully considered before any tree work commences and particularly if the trees are mature. All species of bats are afforded **full** protection under the **Conservation of Habitats and Species Regulations 2017 (as amended)** and **partial** protection under the **Wildlife and Countryside Act 1981 (as amended)**. It is an offence (with limited exceptions) to deliberately take, injure, or kill a bat, intentionally or recklessly disturb a bat in its roost or deliberately disturb a group of bats, deliberately damage or destroy a place used by bats for breeding or resting (roosts) (even if bats are not occupying the roost at the time) or intentionally or recklessly obstruct access to a bat roost.

Therefore, bats are to be fully considered before any tree work commences and particularly if trees contain veteran features (which can occur in young trees as well as older trees). This can include all work on trees whether it is surgery, felling, the covering, or filling of cavities or the installation of rod braces and flexible cable braces. If a bat roost is known to be in any tree that is to be removed or worked on, or if any work is to take place adjacent to a known bat roost that may result in disturbance to that bat/s, then a license must be obtained from Natural Resources Wales or Natural England before work can take place.

Where there is the risk of a bat roosts being present, it is incumbent upon the owner or manager to commission a specialist bat survey to identify bat roosts before instructing tree surgery to commence. Failure to do so and in the event of breaching the legislation detailed above is an offence.

Maximum penalties for committing offences relating to bats or their roosts can amount to imprisonment for a term not exceeding six months or to fines of up to Level 5 on the standard scale under the Criminal Justice Act 1982/ 1991 (i.e., £5000 in April 2001) per roost or bat disturbed or killed, or to both.

NOTE - This is a simplified summary of the legal position relating to bats and birds and is intended for guidance purposes only. If further assistance is required, the primary legislation should be referred to. It may also be necessary to see legal advice or the advice of an appropriately qualified ecologist.

In the event of disturbing a roost site or injuring any bats is an offence. Maximum penalties for committing offences relating to bats or their roosts can amount to imprisonment for a term not exceeding six months or to fines of up to Level 5 on the standard scale under the Criminal Justice Act 1982/ 1991 (i.e., £5000 in April 2001) per roost or bat disturbed or killed, or to both.

Statute and Common Law – for Tree Inspections.

A landowner or land manager should be aware that both statute and common law dictates regular inspections of trees on land in their control are necessary where such trees could cause injury or damage in the event they should fall or shed any parts. A person suitably qualified in arboriculture should undertake such routine inspections and any remedial tree works recommended should be carried out within the time constraints specified, to prevent injury or damage occurring. A landowner should retain records of all inspections and any remedial tree works that have resulted from such inspections. Arboricultural Association, the Malthouse, Stroud Green, Standish, Stonehouse, Gloucestershire, GL10 3DL. Telephone 01242 522152. www.trees.org.uk are able to provide advice on suitably qualified persons or indeed suitable qualifications a person should hold to undertake qualified inspections.

9. LIMITATIONS OF THIS REPORT

It must be stressed that this report is a pre-development survey and not a risk assessment or a detailed report on the health and condition of the trees. Whilst any obvious problems noted during this ground level inspection may be noted, general comments are made based on a somewhat cursory, visual inspection. In addition, future management may receive a mention or be briefly discussed but such comments are general comments only, for basic information, which should not be taken to form immediate or long-term management plan, nor do they replace the need for having professional management plans for groups, areas, or woodlands.

Trees are living dynamic organisms which can be affected by external environmental conditions and very occasionally internal biological symptoms that are not visible, causing failure without warning. It is therefore not possible to state with any certainty that any tree is completely safe. There are occasions when even healthy and completely defect-free trees break or become windblown. This represents a "normal failure rate" which is the price of the lightweight, energy-saving structure that favours the species to compete with others in a cost-effective way.

Every attempt has been made to provide a realistic and accurate assessment of trees and their condition at the time of this inspection. No responsibility can be accepted for damage or injury because of the failure of any tree or its parts due to faults not apparent upon a visual inspection carried out at this season, or for faults developing subsequent to the survey. Similarly, no liability can be accepted for the condition of the trees that are obscured in part or by whole (e.g., due to dense ivy or other foliage), nor for any that proved inaccessible to the inspector. Certain features which might provide evidence of ongoing decay or decline (Such as seasonal fruiting bodies, damage to foliage, insect emergence holes etc.) may not be in evidence. Only those features present at the time of inspection could be assessed.

This report is based on the tree's circumstances and condition at the time of the survey. It must be recognised that the circumstances may be altered radically over the course of any development process and that such changes cannot be accurately predicted. The report also does not provide any specific long-term management recommendations.

The effect this new development may have on localised wind turbulence has not been assessed during this inspection. As trees grow, they respond and mechanically adapt to their surroundings and exposure limits. With the erection of dwellings near existing trees, new turbulence is created. The author accepts no liabilities to any failure subsequent upon such new imposed, artificial conditions.

Unless stated in writing, the inspection shall not include any underground parts of the tree. It does not consider **indirect** damage resulting from the extraction of moisture from shrinkable clay soils by tree roots causing **subsidence** or by **heave** occurring through soil rewetting following removal of trees on this site. Such problems are almost entirely restricted to areas of shrinkable clay soils and as I have **not** considered a soil analysis as part of my present brief, this aspect is **not** addressed at this time.

Unless otherwise stated in writing and in the absence of altered circumstances, a report on the health and safety of a tree or trees cannot be relied on after a period of 12 months. Following such a period, a further inspection is required.

Soil testing to ascertain the plasticity index or shrinkable characteristics of the soil on the development site to provide information in relation to the likelihood of building damage caused by tree related subsidence or heave where trees are within influencing distance has not been carried out. The author cannot be held liable for building damage as a result. A soil analysis can be provided if requested.

Further and more general report limitations are set out in the authors Terms and Conditions and copies are available upon request.

10. TERMS AND DEFINITIONS

For the purposes of this British Standard, the following terms and definitions apply.

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.

Arboricultural method statement

methodology for the implementation of any aspect of development that is within the root protection area (3.7) 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.

Competent person

person who has training and experience relevant to the matter being addressed and an understanding of the requirements of the particular task being approached. NOTE A competent person is expected to be able to advise on the best means by which the recommendations of this British Standard may be implemented.

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 a project.

Crown Spread

The crown spread is measured as the radius from the centre of the trunk in meters and in most cases is approximate covering the four points of the compass. For woodlands or substantial tree groups, the overall extent of the canopy.

Diameter (DBH)

The trunk diameter for each tree is measured in millimetres at a height of approximately 1.5 metres above ground level, unless otherwise stated. All measurements are approximate.

Height

The height of the trees, shrub masses and hedgerows are measured in metres and is usually approximate. If the abbreviation 'Clinom' appears after the given measurement, it indicates the tree has been measured with an optical measuring instrument, a Clinometer, and is accurate to within 5 metres.

Life Stage

The age of the tree is given based on its life expectancy. For example, an oak tree at an age of 100-years is perceived as early mature when a hawthorn at 100 years would be considered old. Age classes are given as follows: -

- Y. **Young trees** (recently planted or saplings under 15 years old)
- SM. **Semi mature** (around 1/3 their life expectancy, still growing vigorously but not as fast as a younger tree)
- EM **Early Mature** (between 1/3 – 2/3 life expectancy still growing reasonably vigorously)
- M. **Mature trees** (above 2/3 life expectancy. Growth rates beginning to slow down at this stage)
- OM. **Over Mature trees** (growth rates slow and possibly beginning to display signs of decline)
- V. **Veteran** (decline is well set-in, but the tree may be of specific ecological value. The tree is likely to contain sufficient deadwood and decay that is a special habitat for many rare invertebrates that are at risk from extinction)

Number (No.)

a tree number is allocated to each tree or group and provides reference to an individual. It will occur either by way of a T-number T1, T2 etc. or a series of numbers e.g., 00123 that relates to an identification tag attached to the stem of each tree. Such numbers will occur on the Tree Constraints Plan.

Recommendations

The recommendations give the appropriate action required for the trees or groups of trees to fulfil the brief, which possibly include reducing the most blatant foreseeable risk or improve the physiology of the tree.

Root protection area (RPA)

layout design tool indicating the 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.

Service

any above- or below-ground structure or apparatus required for utility provision.

NOTE Examples include drainage, gas supplies, ground source heat pumps, CCTV and satellite communications.

Stem

Principal above-ground structural component(s) of a tree that supports its branches

Special Precaution Area this is an area, usually within the root protection area, where construction or other activity may be permitted but only under the direction of an 'Arboricultural Method Statement' and the supervision of an Arborist.

Species The species is the given name of the tree which is usually provided in both the common and scientific names.

Structure

manufactured object, such as a building, carriageway, path, wall, service run, and built or excavated earthwork.

Tree protection plan

scale drawing, informed by descriptive text where necessary, based upon the finalized proposals, showing trees for retention, and illustrating the tree and landscape protection measures.

Veteran tree

tree that, by recognized criteria, shows features of biological, cultural, or aesthetic value that are characteristic of, but not exclusive to, individuals surviving beyond the typical age range for the species concerned. NOTE These characteristics might typically include a large girth, signs of crown retrenchment and hollowing of the stem.

NOTES.

All measurements given are approximate.
 AGL: an abbreviation for above ground level.

REFERENCE. The British Standards Institution 2012

11. GLOSSARY OF TERMS

Adaptive Growth: in tree biomechanics, the process whereby wood formation is influenced both in quality and in quantity by the action of gravitational force and mechanical stresses on the cambial zone (THIS HELPS TO MAINTAIN A UNIFORM DISTRIBUTION OF MECHANICAL STRESS)

Adventitious: Latent or dormant bud on stem or root often invisible until stimulated into growth which occurs from an unusual place i.e., not a twig, leaf or bud.

Anchorage: in trees, the holding of the root system within the soil, involving the flow of forces from the stem through the branches of the root system to the cohesive root/soil interface.

Architecture: in a tree, a term describing the pattern of branching of the crown or root system.

Assessment: in relation to tree hazards, the process of estimating the risk which a tree or group of trees poses to persons or property (THIS INVOLVES A VISUAL INSPECTION FOR DEFECTS AND CONTRIBUTORY SITE FACTORS, AND SOMETIMES ALSO A DETAILED INVESTIGATION OF SUSPECTED DEFECTS)

Assym: This abbreviation means...asymmetric...and refers to the tree having an asymmetric or unbalanced crown. This is usually preceded by a measurement in metres which provides the extent of crown asymmetry and is measured from the centre of the trunk. It may also have a correlation to the lever arm.

Arboriculturalist: person who has, through relevant education, training, and experience, gained recognised qualifications and expertise in the management of trees generally and in relation to construction.

Architecture: in a tree, a term describing the pattern of branching of the crown or root system.

Arboricultural Implication Assessment (AIA) study, undertaken by an arboriculturalist, to identify, evaluate and possibly mitigate the extent of direct and indirect impact on existing trees that may arise as a result of the implementation of the site layout.

Arboricultural Method Statement: methodology for the implementation of any aspects of development that has the potential to result in loss of or damage to a tree.

Assessment: in relation to tree hazards, the process of estimating the risk which a tree or group of trees poses to persons or property (THIS INVOLVES A VISUAL INSPECTION FOR DEFECTS AND CONTRIBUTORY SITE FACTORS, AND SOMETIMES ALSO A DETAILED INVESTIGATION OF SUSPECTED DEFECTS)

Bole (trunk): the main stem of a tree below its first major branch

Branch: a limb extending from the main stem or parent branch of a tree

Canopy: the topmost layer of twigs and foliage in a woodland, tree, or group of trees

Construction Exclusion Zone: area based on the RPA (meters as a radial measurement and sometimes a m²), identified by an Arboriculturalist, to be protected during development, including demolition and construction work, by use of barriers and/or ground protection fit for the purpose to ensure the successful long-term retention of a tree.

Crown: in arboriculture the main foliage-bearing portion of a tree containing the leaves and branches

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

Dysfunction: in woody tissues, the loss of physiological function, especially water conduction.

Failure: in connection with tree hazards, a partial or total fracture within woody tissues or loss of cohesion between roots and soil. (IN TOTAL FAILURE, THE AFFECTED PART SNAPS OR TEARS AWAY COMPLETELY. IN PARTIAL FAILURE, THERE IS A CRACK OR DEFORMATION WHICH RESULTS IN AN ALTERED DISTRIBUTION OF MECHANICAL STRESS)

Group: the term 'group' is intended to identify trees that form cohesive arboricultural features either **aerodynamically** (e.g., trees that provide companion shelter), **visually** (e.g., avenues or screens) or **culturally** including for biodiversity (e.g., parkland or wood pasture).

Heave: in relation to a shrinkable clay soil, expansion due to re-wetting, sometimes after the felling or root severance of a tree which was previously extracting moisture from the deeper layers: also, in relation to root growth, the lifting of pavements and other structures by radial expansion: also, in relation to tree stability, the lifting of one side of a wind-rocked root plate.

Leader: in a tree, a topmost shoot that has apical dominance.

Preventive action: in a tree hazard management, action that helps to prevent injury to persons or damage to property.

Pruning: the removal or cutting back of twigs, branches or roots: in some contexts, applying only to twigs or small branches only, but more often used to describe all kinds of work involving cutting.

Retained Tree: a tree that has been considered suitable by an Arborist for retention and which during the design stage is selected for retention and incorporated within the development.

Risk: the likelihood of the potential harm from a particular hazard becoming actual harm.

Root Protection Area (RPA): layout design tool indicating the area surrounding a tree that contains sufficient rooting volume to ensure the survival of the tree, shown in plan form in m².

Soil heave: *see heave.*

Subsidence: in relation to soil or structures resting in or on soil, a sinking due to shrinkage when clay soils dry out, sometimes due to extraction of moisture by tree roots.

Subsidence: in relation to branches of trees, a term that can be used to describe a progressive downward bending due to increasing weight.

Targets: in a tree hazard assessment (and with somewhat incorrect terminology), persons or property or other things of value, which might be harmed by mechanical failure of the tree or by objects falling from it.

Tree: a woody plant, which typically has a single main stem and, in maturity, attains a height of at least four metres and a stem diameter at breast height of at least 75-mm.

Tree Constraint Plan (TCP): plan prepared by an Arboriculturalist for the purpose of layout design showing the RPA and representing the effect that the mature height and spread of retained trees will have on layouts through shade dominance, etc.

Tree Preservation Order: in Great Britain, an order made by a local authority, whereby the authority's consent is generally required for the cutting down, topping or lopping of specified trees.

Tree Protection Plan: scale drawing prepared by an arboriculturalist showing the final layout proposals, tree retention and tree and landscape protection measures detailed within the arboricultural method statement (AMS), which can be shown graphically.

Trunk: the single main stem of a tree.

Vigour: in tree assessment, an overall measure of the rate of shoot production, shoot extension or diameter growth (*cf. vitality*)

Visual Tree Assessment (VTA): in addition to the literal meaning, a system expounded by Mattheck & Breloer (1995) to aid the diagnosis of potential defects through visual signs and the application of mechanical criteria.

Wind exposure: the degree to which a tree or other object is exposed to wind, with regard both to duration and velocity.

Wind pressure: the force exerted by wind on a tree or other object.

Wind snap: the breaking of a tree stem by wind.

Windthrow: the blowing over of a tree at its roots.

12. REFERENCES

- **British Standard Recommendations for Tree Work BS 3998: 2010**
- **British Standard 5837: 2012 Trees in Relation to Design, Demolition and Construction - Recommendations**
- **Lonsdale D.** Principles of Tree Hazard Assessment and Management. (Department of the Environment, Transport and Regions)
- **Mattheck C. & Breloer H.** The Body Language of Trees (Department of the Environment).

13. APPENDICES

APPENDIX A - TABLE 1 TREE QUALITY ASSESSMENT

APPENDIX B - DEFAULT SPECIFICATION FOR PROTECTIVE BARRIER

APPENDIX C - TABLE B1- TREES AND THE PLANNING SYSTEM

APPENDIX D – PHOTOGRAPHS

APPENDIX E – BASE LINE DATA CAPTURE

APPENDIX F – SITE LOCATION PLAN

APPENDIX G - TREE CONSTRAINTS PLAN

APPENDIX A - TABLE 1 TREE QUALITY ASSESSMENT

The trees are categorised as stated within the British Standard in a way that should help assist those within local government to help form a balanced judgement. The primary purpose of this report is to provide an assessment of the trees and to determine their suitability for retention in any proposed development.

The Tree Categories used in evaluating the trees on this site are reproduced below. This categorisation is also included in the tree data schedules and by colour code on the attached plan.

Category and definition Criteria (including subcategories where appropriate)

Category U

Trees unsuitable for retention (see Note)

Those in such a condition that they cannot realistically be retained as living trees in the context of the current land use for longer than 10 years

- ✓ Trees that have a serious, irremediable, structural defect, such that their early loss is expected due to collapse, including those that will become unviable after removal of other category U trees (e.g., where, for whatever reason, the loss of companion shelter cannot be mitigated by pruning)
- ✓ Trees that are dead or are showing signs of significant, immediate, and irreversible overall decline
- ✓ Trees infected with pathogens of significance to the health and/or safety of other trees nearby, or very low-quality trees suppressing adjacent trees of better quality

NOTE - Category U trees can have existing or potential conservation value which it might be desirable to preserve: Refer to 4.5.7. See Table 2

Trees to be considered for retention

Category A

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

- ✓ 1 Mainly arboricultural qualities- Trees that are particularly good examples of their species, especially if rare or unusual: or those that are essential components of groups or formal or semi-formal arboricultural features (e.g., the dominant and/or principal trees within an avenue)
- ✓ 2 Mainly landscape qualities- Trees, groups or woodlands of particular visual importance as arboricultural and/or landscape features
- ✓ 3 Mainly cultural values, including conservation- Trees, groups or woodlands of significant conservation, historical, commemorative or other value (e.g., veteran trees or wood-pasture) See Table 2

Category B

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

- ✓ 1 Mainly arboricultural qualities- Trees that might be included in category A, but are downgraded because of impaired condition (e.g., presence of significant though remediable defects, including unsympathetic past management and storm damage), such that they are unlikely to be suitable for

retention for beyond 40 years: or trees lacking the special quality necessary to merit the category A designation

- ✓ 2 Mainly landscape qualities- Trees present in numbers, usually growing as groups or woodlands, such that they attract a higher collective rating than they might as individuals: or trees occurring as collectives but situated so as to make little visual contribution to the wider locality
- ✓ 3 Mainly cultural values, including conservation- Trees with material conservation or other cultural value See Table 2

Category C

Trees of low quality with an estimated remaining life expectancy of at least 10 years, or young trees with a stem diameter below 150 mm.

- ✓ 1 Mainly arboricultural qualities- Unremarkable trees of very limited merit or such impaired condition that they do not qualify in higher categories
- ✓ 2 Mainly landscape qualities- Trees present in groups or woodlands, but without this conferring on them significantly greater collective landscape value: and/or trees offering low or only temporary/transient landscape benefits.
- ✓ 3 Mainly cultural values, including conservation- Trees with no material conservation or other cultural value. See Table 2.

NOTE - The British Standard states...*Particular care is needed when evaluating young trees, especially where they occur as individual specimens. Where these are less than 150 mm stem diameter at 1.5 m above adjacent ground level, it might be acceptable and relatively straightforward to mitigate their loss, if necessary, with similar new tree planting. Alternatively, it might be practicable to relocate such trees within the site (e.g., using a tree spade). Whilst the presence of young trees of good form and vitality is generally desirable (i.e. those trees which have the potential to develop into quality mature specimens), they need not necessarily be a significant constraint on the site's potential.*

Where remaining contributory years' score is provided within the 'Findings' , and where further investigative works are required, these scores are preliminary only and based on an incomplete inspection.

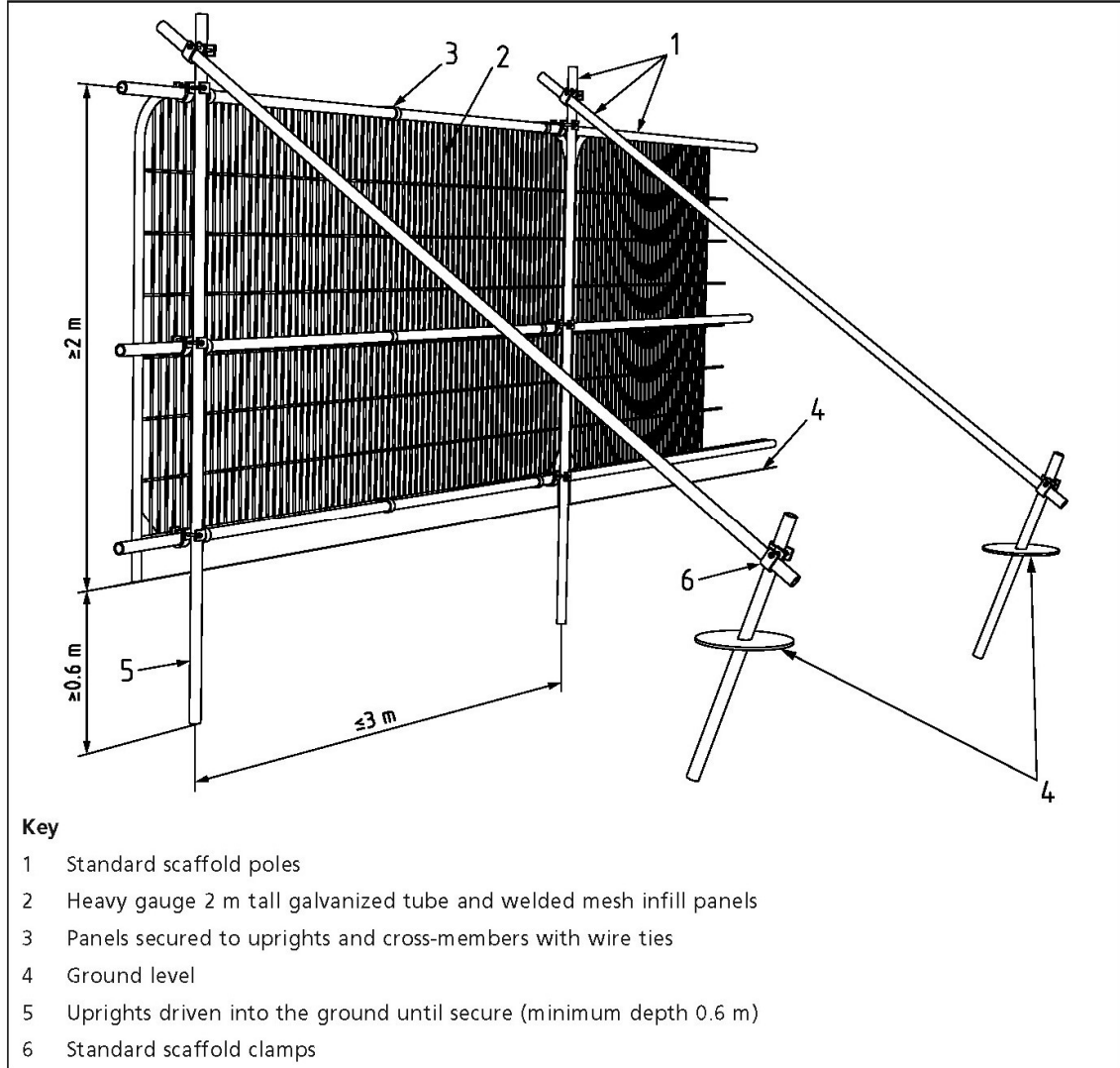
BRITISH STANDARD BS 5837:2012

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APPENDIX B - DEFAULT SPECIFICATION FOR PROTECTIVE BARRIER

Figure 2 Default specification for protective barrier



APPENDIX C - TABLE B1- TREES AND THE PLANNING SYSTEM

BS 5837:2012

BRITISH STANDARD

**Annex B
(informative)**

Trees and the planning system

Under the UK planning system, local authorities have a statutory duty to consider the protection and planting of trees when granting planning permission for proposed development. The potential effect of development on trees, whether statutorily protected (e.g. by a tree preservation order or by their inclusion within a conservation area) or not, is a material consideration that is taken into account in dealing with planning applications. Where trees are statutorily protected, it is important to contact the local planning authority and follow the appropriate procedures before undertaking any works that might affect the protected trees.

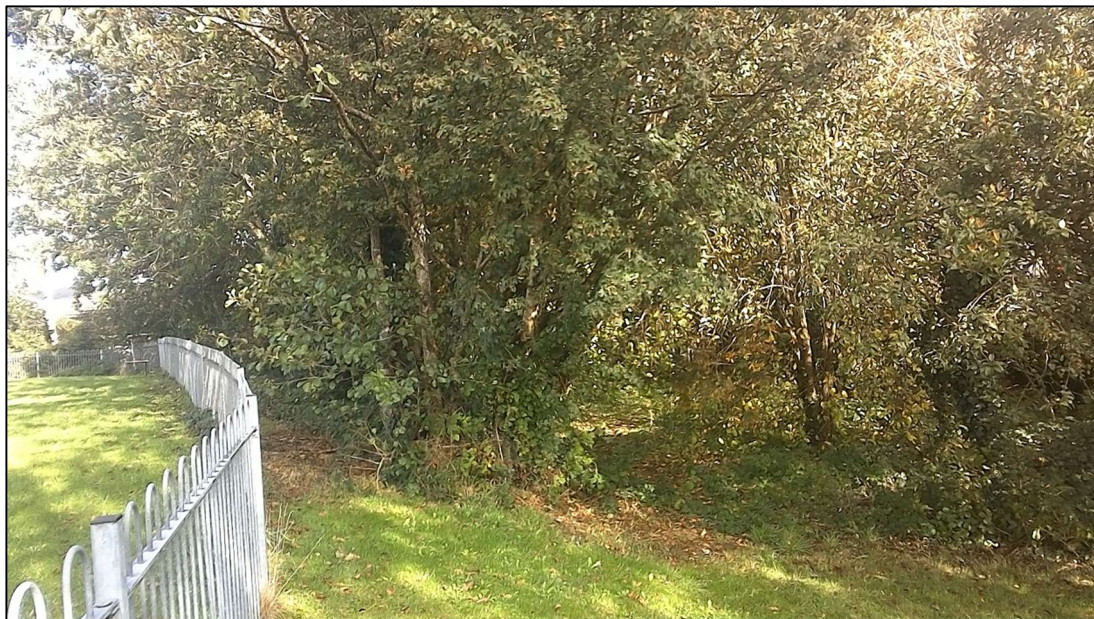
The nature and level of detail of information required to enable a local planning authority to properly consider the implications and effects of development proposals varies between stages and in relation to what is proposed. Table B.1 provides advice to both developers and local authorities on an appropriate amount of information. The term "minimum detail" is intended to reflect information that local authorities are expected to seek, whilst the term "additional information" identifies further details that might reasonably be sought, especially where any construction is proposed within the RPA.

Table B.1 Delivery of tree-related information into the planning system

Stage of process	Minimum detail	Additional information
Pre-application	Tree survey	Tree retention/removal plan (draft)
Planning application	Tree survey (in the absence of pre-application discussions) Tree retention/removal plan (finalized) Retained trees and RPAs shown on proposed layout Strategic hard and soft landscape design, including species and location of new tree planting Arboricultural impact assessment	Existing and proposed finished levels Tree protection plan Arboricultural method statement – heads of terms Details for all special engineering within the RPA and other relevant construction details
Reserved matters/ planning conditions	Alignment of utility apparatus (including drainage), where outside the RPA or where installed using a trenchless method Dimensioned tree protection plan Arboricultural method statement – detailed Schedule of works to retained trees, e.g. access facilitation pruning Detailed hard and soft landscape design	Arboricultural site monitoring schedule Tree and landscape management plan Post-construction remedial works Landscape maintenance schedule

APPENDIX D - PHOTOGRAPHS

Photograph 1. Group 1 - Even aged broadleaved plantation of mostly native species with the occasional non-native. Provides a forest school type setting.



Photograph 2. Tree 3 – Cherry with a compressive main union at 2-m AGL, leads to a column of reaction wood in response to this structurally weak union, extending to the enlarged buttress at the base.



Photograph 3. Tree 4 - Ash dieback disease – Health Stage 2/3. Rigid movement under wind loading was noted within the upper crown, associated with brittleness.



Photograph 4. Group 2 - Small group of even aged, planted trees of average form. These trees are located on a triangular grassed area that gently descends from the north car park. They provide screening to and from the site.



Photograph 5. Hedge 2 - Native mixed species hedge, located on the school side of the metal palisade boundary fence, to the east of the main entrance. The willow are multi-stemmed and have slender stems (red polygon).



Photograph 6. Tree 24 – Oak with a significant area of decay around basal union, resulting in declined crown health. The northern stem is dead.



Photograph 7. Tree 24 - Oak with a significant area of decay around basal union, resulting in declined crown health. The northern stem is dead.



APPENDIX E – BASE LINE DATA CAPTURE

The following baseline data for each tree, group of trees or woodland have been recorded in the Table of Findings & Section 3.

Prefix – Tree (T), Group (G), Hedge (H), Woodland (W).

Species including the common and scientific names.

Height measured in metres from the stem base. Where the ground has a significant slope, measurements are taken from the higher ground.

Crown height within groups is measured in metres as an indication of average height where the main crown is formed.

Stem diameter is measured in millimetres at 1.5-m above ground level. Where the ground has a significant slope measurements are taken from the higher ground or immediately above the root flare for multi-stemmed trees.

Crown spread is measured in metres at the four cardinal points to accurately represent the crown.

Age class is described as young, semi-mature, early mature, mature or over-mature.

Physiological condition as applicable is classed as good, fair, poor, or dead. This is an indication of the health of the tree and considers vigour, presence of disease and dieback.

Structural condition as applicable is classed as good, fair or poor. This is an indication of the structural integrity of the tree and takes into account significant wounds, decay and quality of branch junctions.

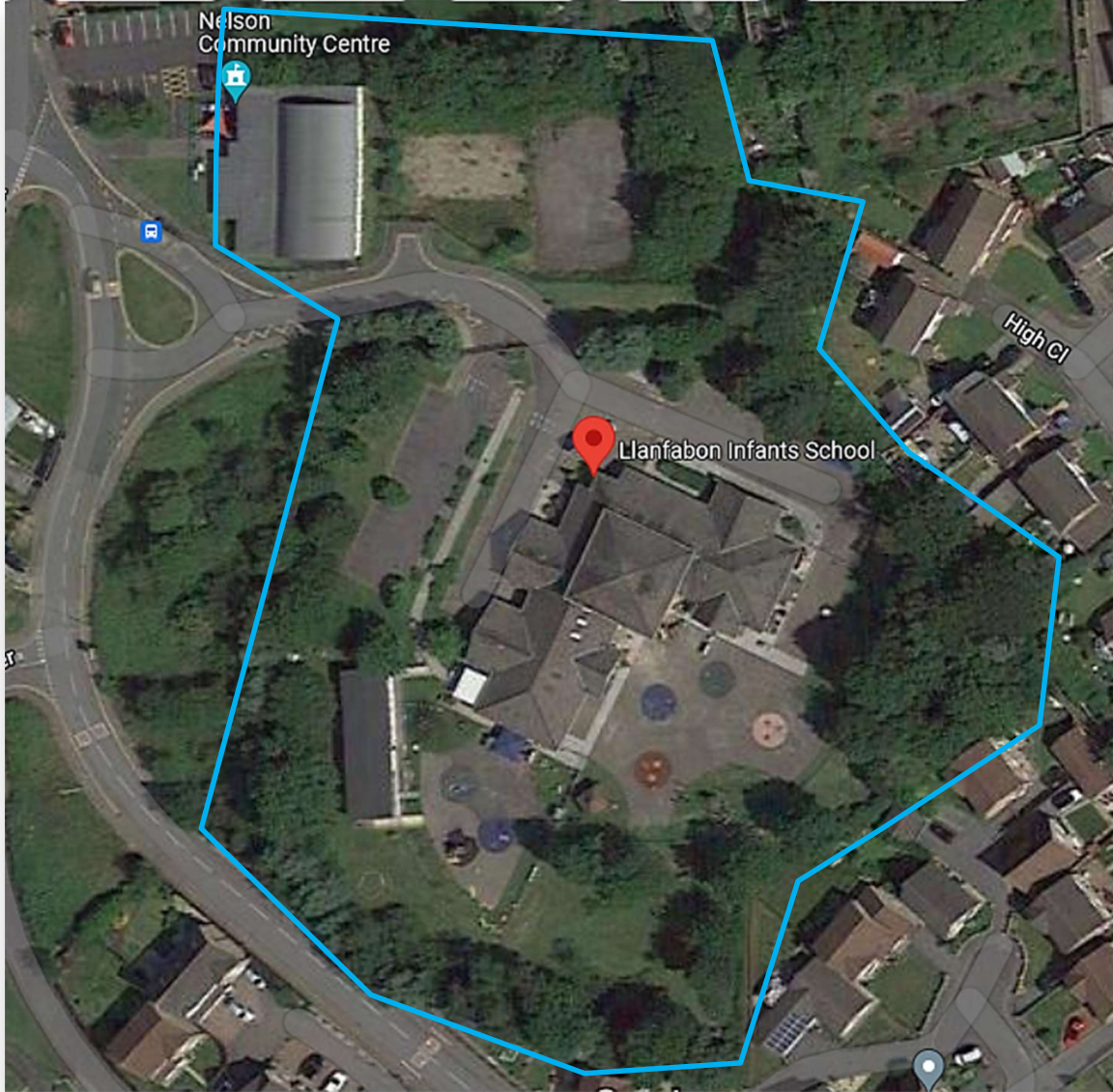
Life expectancy is classed as: less than 10 years (<10) (Very Short): 10-20 years (Short): 20-40 years (Medium): or more than 40 years (40+) (Long). This is an indication of the safe useful life expectancy and number of years before removal is likely.

General Observations may include a brief description to include the visual merits of the tree/s, other beneficial characteristics, form, vitality, health and any visually obvious significant defects that may be present.

Recommendations are given in order to offset risks posed by identified hazards, management to improve the amenity value / habitat value / life expectancy.

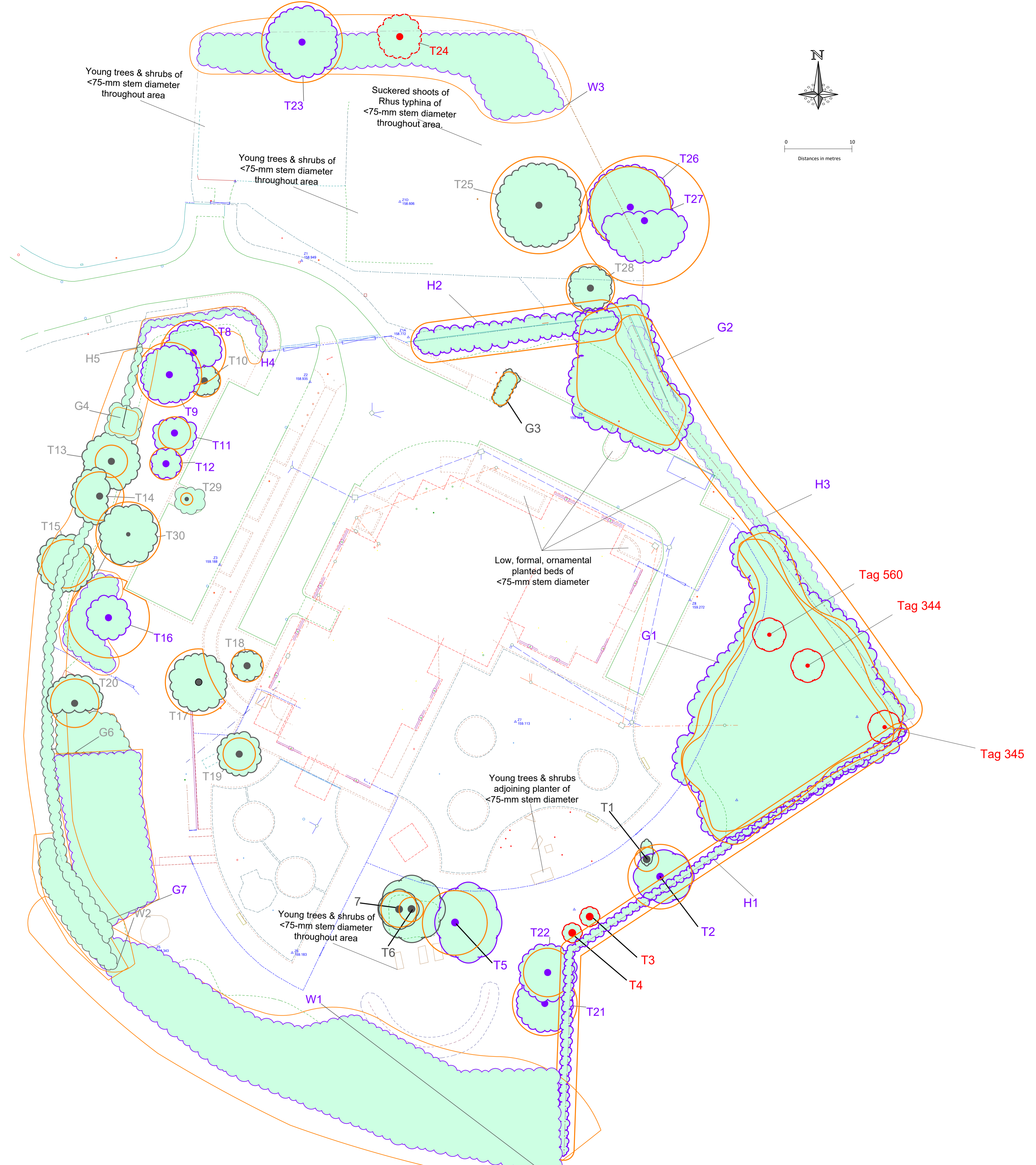
APPENDIX F – SITE LOCATION PLAN

Survey area – Blue Polygon



Source: Google Images 2021

APPENDIX G – TREE CONSTRAINTS PLAN



Ref.	Tree Tag	Species	Effectual Diameter (mm)	Remaining Contribution (years)	Retention Class	RPA Area	RPA Area
G1	NA	Silver birch, ash, sycamore, white willow, horse chestnut, field maple, elder, hazel, bird cherry, whitebeam, apple, common alder, holly, Norway maple	325	40+	B 2,3	48	4
G2	NA	Field maple, whitebeam, sycamore, wild cherry, hawthorn	375	40+	B 2,3	64	5
G3	NA	Ash with evergreen ornamental shrubs.	100	20-40	C 2	5	1
G4	1869-1870	"Field Maple (Acer campestre)"	240	20-40 Years	C 2	25	3
G5	1875 1877 1878	"Rowan (Sorbus aucuparia) Field Maple (Acer campestre) Cultivar Apple (Malus domestica)"	400	10-20	B2	72	5
G6	N/A	"Oak (Quercus sp.) Cultivar Apple (Malus domestica)"	200	20-40 Years	C2,3	18	2
G7	1887-1888	"Cultivar Apple (Malus domestica) Sycamore (Acer pseudoplatanus)"	460	50	B2,3	17	6
W1	1889-1900	"Silver Birch (Betula pendula) Crack Willow (Salix fragilis) Whitebeam (Sorbus aria) Sycamore (Acer pseudoplatanus) Wild Cherry (Prunus avium) Common Ash (Fraxinus excelsior)"	400	40+	B2	72	5
W2	N/A	"Silver Birch (Betula pendula) Goat Willow (Salix caprea) Crack Willow (Salix fragilis)"	100	20-40	C2	5	1
W3	1893-1894	"Pedunculate Oak (Quercus robur) Hazel (Corylus avellana) Common Holly (Ilex aquifolium)"	200	20-40 Years	B2	18	2
H1	NA	Hawthorn, holly, hazel, field maple, white willow	125	40+	B 2,3	7.0	2
H2, H3	NA	White willow, hazel, goat willow, field maple, blackthorn, holly, dog rose	250	20-40	B 2,3	28	3
H4	1881 to 1882	"Crack Willow (Salix fragilis) Field Maple (Acer campestre) Hazel (Corylus avellana)"	200	10-20	B2	18	2
H5	1883-1884	"Field Maple (Acer campestre) Crack Willow (Salix fragilis) Common Hawthorn (Crataegus monogyna)"	200	20-40 Years	C2	18	2
T1	NA	Downy birch	150	20-40	C 2,3	10	2
T2	346.000	Ash	400	20-40	B 2,3	72	5
T3	347.000	Wild cherry	450	<10	U	0	0
T4	348.000	Ash	450	<10	U	0	0
T5	NA	Wild cherry	400	20-40	B 2	72	5
T6	349.000	White willow	150	10-20	C 2	10	2
T7	NA	Ash	225	20-40	C 2	22	3
T8	1864	"Whitebeam (Sorbus aria)"	390	<10 years	B2	69	5
T9	1865	"Sycamore (Acer pseudoplatanus)"	420	40+	B2	79	5
T10	1866	"Common Hawthorn (Crataegus monogyna)"	210	10-20	C2	20	3
T11	1867	"Whitebeam (Sorbus aria)"	250	20-40	B2	28	3
T12	1868	"Wild Cherry (Prunus avium)"	220	20-40	B2	21	3
T13	1871	"Field Maple (Acer campestre)"	200	<10 years	C2	18	2
T14	1872	"Field Maple (Acer campestre)"	280	10-20	C2	36	3
T15	1872	"Field Maple (Acer campestre)"	320	20-40 Years	C2	45	4
T16	1876	"Wild Cherry (Prunus avium)"	500	40+ Years	B2	11	6
T17	1879	"Sycamore (Acer pseudoplatanus)"	390	40+ Years	C2	69	5
T18	1880	"Cultivar Apple (Malus domestica)"	210	20-40 Years	C2	20	3
T19	1885	"Bird Cherry (Prunus padus)"	170	20-40 Years	C2	13	2
T20	1886	"Goat Willow (Salix caprea)"	280	20-40 Years	C1	36	3
T21	1891	"Field Maple (Acer campestre)"	400	20-40 Years	B	72	5
T22	1892	"Wild Cherry (Prunus avium)"	330	50	B2	50	4
T23	1895	"Pedunculate Oak (Quercus robur)"	510	40+ Years	B2	11	6
T24	1896	"Pedunculate Oak (Quercus robur)"	0	40+ Years	U	0	0
T25	1897	"Goat Willow (Salix caprea)"	560	20-40 Years	C2	14	7
T26	N/A	"Pedunculate Oak (Quercus robur)"	500	20-40 Years	B2	11	6
T27	N/A	"Common Beech (Fagus sylvatica)"	800	20-40 Years	B2	29	10
T28	N/A	"Silver Birch (Betula pendula)"	300	10-20	C2	41	4
T29	1898	"Rhus (Rhus spp.)"	75	20-40	C2	3	1
T30	1873	Field Maple (Acer Campestre)	400	20-40	C2	72	5

Key

Trees to be considered for retention.

- A - High
- B - Moderate
- C - Low
- Root Protection Area

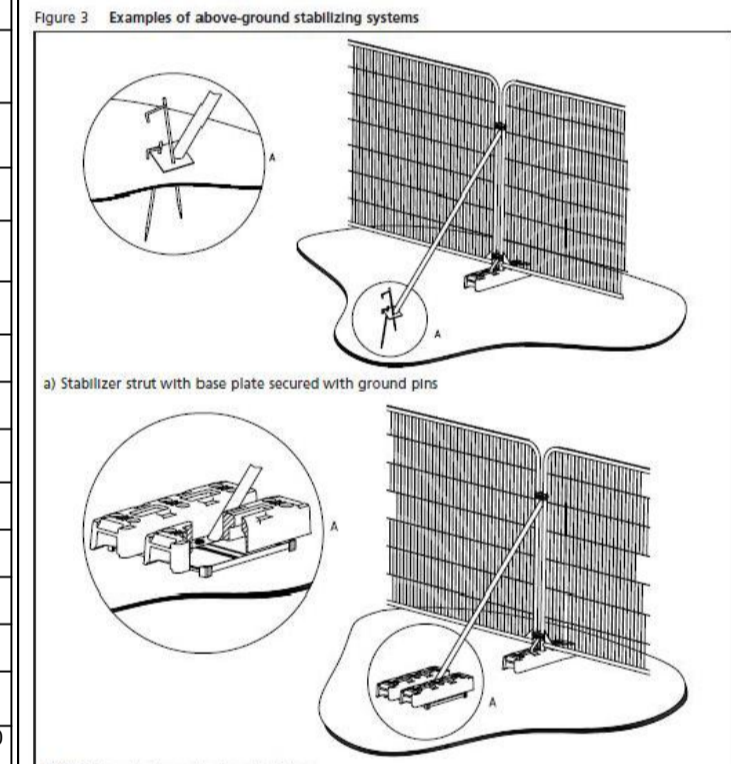
Trees unsuitable for retention.

- U - Fell

Tree Key

- Crown Spread. Measured in North, South, East and West side of tree.
- T1 Tree number. (T - Individual Tree, G - Group, A - Tree area, W - Woodland, H - Hedgerow)

Root Protection Area (RPA)
A layout design tool indicating the 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.



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Client	Caerphilly County Borough Council
Surveyed by	SJA
Date surveyed	May 2022
Drawn by	LP/BC
Scale	1:300 when printed at A1
OS Grid Ref	311085 (E) 195329 (N)

INDICATIVE ONLY.
PLEASE REFER TO ROOT PROTECTION TABLE.
DO NOT SCALE FROM THIS DRAWING.
CHECK ALL DIMENSIONS ON SITE

REF. DRAWINGS	Topographical Survey
21576_A_2D.dwg	

TITLE
**Tree Constraints Plan
Llanfabon Infants School Version 2**

DRAWING No: **21-073**

Overgrown inaccessible area with sporadic tree growth throughout. Blackthorn, hawthorn, goat willow, cherry, largely below 75mm diameter, none with likely root growth extending into site

(Please check all RPA's on site.)

This plan should be read in conjunction with the Llanfabon Infants School Tree Survey & Categorisation Report May 2022 (Ambler SJ.)

The original of this drawing was produced in colour. A monochrome copy should not be relied upon.