



SJ Stephens Associates

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Arboricultural Impact Assessment

- Tree Survey
- Tree Protection Plan
- Arboricultural Method Statement

At:-

Edelweiss
Church Close
Abbotts Ann
SP11 7BH

On behalf of:-

Mr and Mrs Marzano
Edelweiss
Church Close
Abbotts Ann
SP11 7BH

Prepared by:

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Survey Date: 22nd March 2021
Report Date: 15th April 2021
Project no: 1658

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1 BACKGROUND

- 1.1 This Arboricultural Impact Assessment has been instructed by Bourne Valley Associates, on behalf of Mr and Mrs Marzano to specify tree protection measures and to assess the arboricultural impact of the proposed erection of a single storey extension, construction of first floor accommodation and internal alterations at Edelweiss.
- 1.2 Trees were surveyed, with findings shown in the Tree Schedule in Appendix B and plotted on the Tree Protection Plan in Appendix A. This also shows tree protection measures, which are specified in the Arboricultural Method Statement in section 5 below. The arboricultural impact is assessed in section 6, which assumes that these measures are followed.
- 1.3 The tree survey was undertaken, and this report has been prepared, by Catherine Fforde HND Hort, Dip Arb L4(ABC), MCIHort, MArborA and approved by Simon Stephens MA Oxon, Dip Arb (RFS), MArborA, C Env, MICFor a Registered Consultant with the Arboricultural Association, with over 20 years relevant experience.
- 1.4 This survey and report have been prepared in accordance with the recommendations of BS 5837:2012, Trees in relation to design, demolition and construction - Recommendations.

1.5 Documentation supplied:

- Topographical Survey
- Bourne Valley Associates, Proposed Plans: drawing no: 03000-01
- Bourne Valley Associates, Proposed Elevations: drawing no: 03000-01
- Bourne Valley Associates, 3D Views: drawing no: 03000-01
- Bourne Valley Associates, Sections: drawing no: 03000-01

2 SURVEY DETAILS AND SCOPE

- 2.1 The site survey included trees and shrubs, within influencing distance of the proposed development, with a stem diameter over 75mm at 1.5m height, as shown located on the Tree Protection Plan, included as Appendix A.
- 2.2 Tree inspection took place from ground level with the use of binoculars, sounding hammer and metal probe using the Visual Tree Assessment method (Mattheck & Breloer 1994). The presence and condition of bark and stem wounds, cavities, decay, fungal fruiting bodies and any structural defects that could increase the risk of structural failure were noted.
- 2.3 Tree diameters were measured using a girthing tape and tree heights were measured using a hypsometer. Where use of a tape was restricted by site factors, diameters were estimated, with the diameter recorded in the tree schedule preceded by the word "est".
- 2.4 At the time of the survey, the weather was fine with no restrictions to visibility. Broadleaf trees were not in leaf. There were no limitations to access around the trees. In places, dense ivy restricted visibility of tree stems.
- 2.5 Tree details are shown on the Tree Protection Plan included as Appendix A. Tree locations have been taken from the topographical survey provided. Where not included on the topographical survey, they have been determined by measuring distances from features shown on the plan, using a laser measuring device. The following information was recorded for each tree, and is shown in the Tree Schedule included as Appendix B:
- **Number:** an identity number for each tree, prefixed with a "T", which cross references locations shown on the plan with the schedule in Appendix B. Where a number of trees are located close together and are similar in character and management requirements, they have been treated as a Group under a single number, prefixed with a "G".
 - **Species:** common name.
 - **Tree height:** approximate height in metres.
 - **Stem diameter:** diameter in millimetres, taken at 1.5m above ground. Where there are a number of stems, stem diameters are recorded in the condition column.
 - **Branch spread:** approximate spread in metres to N,S,E and W of the trunk. The approximate branch spread is drawn on the plan.

- **Canopy clearance:** approximate height of the canopy above ground. Where a significant, low lateral branch is present, its height and direction of growth is included in the Condition column.
- **Age class:** Young, Semi-mature, Early mature, Mature, Over-mature, Veteran.
- **Condition:** features that affect the safe useful life expectancy and amenity of the tree, including the presence of decay or any physical defect.
- **Management Recommendations:** recommendations to ensure the health and safety of the tree, within the future development.
- **Estimated Remaining Contribution:** <10 years, 5-15 years, 10-20 years, 15-30 years, 20-40 years, >40 years.
- **Category grading:** tree classification taken from BS 5837:2012, Trees in relation to design, demolition and construction (see Appendix C for details), as follows:
 - Category U: Unsuitable for retention, trees with less than 10 years life expectancy, normally recommended for removal (Red)
 - Category A: high quality trees, able to make a substantial contribution for at least 40 years, normally retained unless there is an over-riding reason for removal and appropriate mitigation. (Green)
 - Category B: moderate quality trees, able to make a significant contribution for at least 20 years, normally retained. (Blue)
 - Category B/C: an intermediate category between categories B and C (not specifically described in BS5837). Trees, which should be retained wherever possible, providing retention does not unreasonably constrain the layout. (Blue)
 - Category C: low quality, in adequate condition to remain for at least 10 years, or young trees <150mm stem diameter. Trees which can be removed to allow the desired layout or new planting. (Grey)

For category A, B and C trees, a subcategory has been allocated, providing information on the reasons for selection of a specific category, as follows:

- Subcategory 1: mainly arboricultural values.
- Subcategory 2: mainly landscape values.
- Subcategory 3: mainly cultural values, including conservation.
- Trees have been classified irrespective of the possible proximity to future construction. The BS 5837 category is colour coded, as indicated above, on the plan included as Appendix A.
- **Protection Distance:** the protection distance in metres required to provide the Root Protection Area recommended in BS 5837, assuming a circular area centred on the tree.
- **Root Protection Area (RPA):** the area in m², as recommended in BS 5837, to provide sufficient rooting area to ensure tree survival and which, in most situations, should be fenced off to prevent root damage from construction activities.

3 SURVEY LIMITATIONS

- 3.1 No internal decay devices, or other invasive tools to assess tree condition, were used.
- 3.2 No soil excavation or root inspection was carried out.
- 3.3 This survey has not considered the effect that trees or vegetation may have on the structural integrity of future building through subsidence or heave.
- 3.4 The tree survey has been undertaken for planning purposes. Although any obvious structural defects have been noted, a Tree Hazard Assessment has not been carried out. Mature trees close to highly populated areas or public highways should normally be checked for safety annually, by a suitably qualified person.

4 LEGAL PROTECTION OF TREES

- 4.1 The Test Valley Borough Council website was viewed on 15.04.2021, which showed that the site within the Abbots Ann Conservation Area. The Tree Preservation Order Register shows that there is a Tree Preservation Order, ref no: TPO.TVBC.127, that covers trees at Edelweiss and Church View. The presence of Planning Conditions currently attached to the site, was not checked.
- 4.2 Once planning permission has been granted, provided the application clearly shows any trees to be removed or pruned, this overrides protection provided by Tree Preservation Orders or Conservation Areas, provided the work is necessary to implement the approved development. If not essential, a separate tree work application will need to be submitted for trees protected by a Tree Preservation Order.

5 ARBORICULTURAL METHOD STATEMENT

5.1 Site Overview

- 5.1.1 The proposal is for the erection of a single storey extension, construction of first floor accommodation and internal alterations to the existing dwelling. The proposed extension plan is included as Appendix F and has been added to the survey drawing, along with tree details, to create the Tree Protection Plan attached as Appendix A.
- 5.1.2 Access to the property is via a tarmac driveway off Church Close. A concrete footpath provides access along the south side of the dwelling to the rear garden area. To the southeast of the driveway are three mature trees, T3, T4 and T5, which are shown in the photos included as Appendix E. The rear garden is laid to lawn and has only sections of hedging along the northern and southern boundaries.
- 5.1.3 A hedge of Leyland cypress, sycamore and yew (G6) runs along a section of the southern boundary. The hedge is patchy and providing a low level of screening from the adjacent public right of way.
- 5.1.4 The new extension is proposed to the west elevation of the dwelling, away from mature trees. The existing garage is proposed for conversion and it is likely that a new foundation will be required across the existing opening, where a new wall will be constructed.

5.2 Tree Work

- 5.2.1 Details of proposed tree works are included in the Tree Schedule included as Appendix B.
- 5.2.2 One tree and sections of one group are proposed for removal, as detailed in section 6.1 below.
- 5.2.3 All tree work must be undertaken to the standards set out in BS 3998:2010 Tree work – Recommendations.

5.3 Root Protection Areas

- 5.3.1 Root Protection Areas are shown for all trees in the tree schedule included as Appendix B. They are also shown for all retained trees, as circular areas centred on the trunk, on the Tree Protection Plan included as Appendix A. Where there are physical obstructions to root growth the Root Protection Area should be shown as an equivalent area that is more likely to reflect actual root growth. The Root Protection Area shows the area around a tree in which all construction activity must normally be excluded, unless appropriate protection measures are implemented.

5.4 Tree Protection Fencing

- 5.4.1 Tree Protection Fencing must be erected where shown on the Tree Protection Plan, included as Appendix A. This will provide full protection of the Root Protection Areas of all retained trees other than for:
- area shaded cyan on the Tree Protection Plan, indicating a Ground Protection Area, where roots must be protected, as described in section 5.5 below.
 - area cross hatched red on the Tree Protection Plan, where there will be excavation at the edge of a Root Protection Area, but where hand excavation must be used, as described in section 5.6, to minimise potential root damage.
- 5.4.2 Tree works can be completed before Tree Protection Fencing is erected, however no contractors plant or vehicles must be allowed to track within the Root Protection Areas unless ground protection panels are laid.
- 5.4.3 Tree Protection Fencing must be from weldmesh panels, at least 2m high, securely fixed, with wire or scaffold clamps, to a rigid framework. This framework must be constructed from scaffold tubes with vertical tubes, at a maximum interval of 3m and driven into the ground at least 0.6m. The structure must be well braced to resist impacts, constructed as per Figure 2 of BS5837:2012, which is reproduced in Appendix D. Alternatively, weldmesh panels can be supported on blocks, providing the blocks are pinned to the ground with road pins, or similar, and the panels are braced, as per Figure 3 of BS5837:2012, which is also reproduced in Appendix D.
- 5.4.4 After erection of Tree Protection Fencing and installation of ground protection, two days' notice must be given to the Local Planning Authority before demolition or construction, including any ground work, starts on site.
- 5.4.5 Tree Protection Fencing must be maintained and retained for the duration of the works, or until such time as agreed in writing with the Local Planning Authority.
- 5.4.6 Weatherproof notices must be fixed to the Tree Protection Fencing, and maintained, stating:-

**TREE PROTECTION AREA
KEEP OUT**

TREES ENCLOSED BY THIS FENCE ARE PROTECTED BY PLANNING CONDITIONS
AND A TREE PRESERVATION ORDER/ CONSERVATION AREA STATUS
CONTRAVENTION MAY LEAD TO CRIMINAL PROSECUTION
THE FOLLOWING MUST BE OBSERVED BY ALL PERSONS:

- The Protection Fence must not be moved
- No person or machine must enter the area
- No materials or spoil must be deposited
 - No excavation must be permitted

ANY INCURSION INTO THE PROTECTED AREA MUST BE WITH THE WRITTEN
PERMISSION OF THE LOCAL PLANNING AUTHORITY

5.5 Ground Protection Area

- 5.5.1 The Ground Protection Area, which is shaded cyan on the Tree Protection Plan, contains hard surfacing which is protecting any underlying roots. No excavation must be permitted beneath the base course within this area.

5.6 Hand Dig Area

- 5.6.1 The Hand Dig trench, shown cross-hatched red on the Tree Protection Plan, must be dug to formation level /a depth of 1m using only hand tools such as concrete breaker and a shovel. Any roots found must be neatly severed, using secateurs or a hand saw. Any further excavation required, to a depth greater than 1m, can be carried out with an excavator, since it is unlikely that significant live roots will be found.
- 5.6.2 Heavy-duty polythene must be used to line the side of the trench adjacent to the tree, before concrete is poured, to avoid the toxic effects of cement on tree roots.
- 5.6.3 On no account must use of an excavator be used in the top 1m of the Hand Dig area, which would rip roots and cause unnecessary damage.

5.7 General measures

- 5.7.1 No construction activity whatsoever, including routing of underground services, storage of materials or on-site parking, must be allowed within Root Protection Areas, other than that specifically described above.
- 5.7.2 No mixing or storage of cement, concrete, oil, fuel, bitumen or other chemicals must be permitted within 10m of the trunk of any retained trees, nor in any position where the slope of the ground could lead to contamination of the Root Protection Area.
- 5.7.3 Fires must not be lit in a position where their flames could extend to within 10m of foliage, branches or trunk.
- 5.7.4 Landscape works carried out within Root Protection Areas must be undertaken with great care so as not to damage shallow roots. Tractor mounted rotovators or other heavy mechanical cultivation must not be used within the Root Protection Areas.
- 5.7.5 If any tree shown for retention is removed, uprooted or destroyed, another tree must be planted in the same location, at a size and species to be agreed in writing with the Local Planning Authority.
- 5.7.6 A copy of this report and the Tree Protection Plan must be kept on site and must be fully understood by the Site Agent.

5.8 Bat roosts

- 5.8.1 The current legislation makes it a criminal offence to disturb, damage or destroy any bat roost or hibernation area. However, none of the trees recommended for felling are considered suitable for bats to use either for hibernation or temporary roost sites. The lack of cavities, cracks, loose bark or slab ivy makes it unlikely that bats will use the trees, except possibly for foraging for food. Contractors must be reminded of their responsibilities and should contact the relevant authorities if any signs of bats are found.

5.9 Birds

- 5.9.1 The current legislation makes it a criminal offence to disturb nesting birds. The nesting season is generally assumed to be from 1st March to 31st July, however this can vary depending on species and location. During these months a careful inspection must be made before work commences and works must be postponed if active nests are found.

6 ARBORICULTURAL IMPACT ASSESSMENT

6.1 The following tree / group, categorized as per BS 5837 (see Appendix C for details), are proposed for removal:

- Category U – unsuitable for retention: One tree – T7.
- Category C – low quality: Sections of one group – G6.

The only removals have been recommended for reasons of sound arboricultural management and are not required to facilitate the development.

6.2 A small amount of excavation is proposed at the edge of the Root Protection Area of T4 to construct a small foundation. Hand dig excavation has been specified to minimise potential root loss and damage to the retained section of the Root Protection Areas.

6.3 Although preservation of Root Protection Areas is deemed to protect tree roots, in some cases buildings may need to be set further back to ensure the future sustainability of trees. If buildings are too close to trees, future occupiers may be likely to seek the reduction, or removal of trees, if they are cutting out excessive sunlight or providing a claustrophobic or threatening environment.

6.4 Section 5.2.2 of BS 5837:2012 states that “an indication of potential direct obstruction of sunlight can be illustrated by plotting a segment with a radius from the centre of the stem equal to the height of the tree, drawn from due North West to due East, indicating the shadow pattern through the main part of the day.” Shading patterns for key trees have been shown on the plan. This shows that a small section of the existing dwelling is within a tree shade area. No changes are proposed to the use of this area of the dwelling as a bedroom. The living areas of the dwelling are unaffected by tree shade.

6.5 The footprint of the dwelling will not be extended towards the trees. Instead, retained trees will continue to contribute to the amenity of the site and the screening of dwelling. The proposals will not therefore adversely affect the sustainability of retained trees.

6.6 Provided the recommendations in this report are followed, the arboricultural impact of this development on existing trees will be minimal. The proposed replacement of sections of the existing boundary hedge will improve site screening and will provide a more sustainable hedge.

7 REFERENCES

- *BS5837:2012 Trees in relation to design, demolition and construction – Recommendations.*
- *BS3998:2010 Tree Work. Recommendations.*

APPENDIX A

Key	
Category U	●
Category A	●
Category B	●
Category C	●
Crown assessed - retained trees	
Trees For Removal	
Root Protection Area	
Tree Protection Fence	
Ground Protection Area: existing hard surface	
Hand Dig Area	
BS 5837 Shade Area	

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JOB TITLE	EDELWEISS
DRAWING TITLE	TREE PROTECTION PLAN

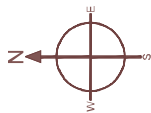
DRAWING NUMBER	1658-01
REVISIONS	
SCALE	1:200 at A2
DATE	APR 21
DRAWN BY	C Forde



TREE SHADE WILL BE AS EXISTING AND IS THEREFORE NOT AN ISSUE IN THIS CASE.

HAND DIG AREA FOR NEW FOUNDATION.

REMOVAL OF LOW QUALITY SECTIONS OF THE BOUNDARY HEDGE, AND REPLACEMENT WITH YEW, WHICH WILL GROW WELL UNDER SHADE CONDITIONS, IS PROPOSED TO IMPROVE SCREENING TO THE PROPERTY FROM THE ADJACENT FOOTPATH AND FROM THE PUBLIC BENCH THAT IS LOCATED IMMEDIATELY TO THE BACK OF THE FENCE.



Tree/ Group No.	Species	Height (m)	Stem Diam. at 1.5m (mm)	Branch Spread (m)				Canopy Clearance (m)	Age Class	Observations	Management Recommendations	Estimated Remaining Contribution (years)	BS 5837 Category Grading	Protect ion Distance (m)	Root Protect. Area (m ²)
				N	S	E	W								
G1	Hedge	1.8 - 2.5	125					0	Mature	Tightly clipped Lawson cypress.	10-20	C2	1.5	7	
T2	Shrubs/Small trees	0.7 - 3	50 - 125					0.3	Early mature/ Mature	Species including hazel, berberis, and mock orange with two small plum trees.	5-15	C2	1.5	7	
T3	Corsican pine	16	790	7.5	5	4.5	5	4.5	Mature	Crown thinning. Dead branch (150mm diameter) over driveway and dead branch (200mm diameter) over play area.	15-30	B2	9.5	282	
T4	Oak	16	970	5	6.5	4	6.5	3.5	Mature	Crown reduced. Ivy severed around base but covering stems to upper crown. Sparse crown but with good vitality in low, fresh growth. Basal bark wound to west with heartwood exposed.	20-40	B2	11.6	425	
T5	Beech	20	890	6	8	8	6	3.0	Mature	Ivy severed around base but covering main stem to upper crown. Decayed fungal bracket at base to south - stem sound on resonant hammering. Good vitality.	>40	A-B2	10.7	358	
G6	Sycamore/Yew/ Leyland cypress	1.5 - 4.5	25 - 100					0.0	Semi- mature/ Early mature	Mixed hedge. Gappy and ivy covered. Sycamore and thinning conifers growing up into tree crowns at eastern end. Remove sycamore and Leyland cypress. Clear ivy from hedge line. Replant with yew hedging. Tree stumps must not be removed using mechanical excavation in root protection areas, instead stumps must be ground out.	5-15	C2	1.2	5	
T7	Cherry	1.8	110	1.2	1	1.2	1	1.0	Mature	Small weeping tree. Top dead and dieback at branch extremities.	<10	U	1.3	5	
T8	Cherry	1.8	60	3	0.5	3	1	0.5	Semi- mature	Three stems from 1.2m - 30, 40 & 40mm. Poor form and structure.	5-15	C2	0.7	2	
G9	Laurel	1.8	50					0	Early mature	Short section of hedge. Some holly, spindle and sycamore.	5-15	C2	0.6	1	
G10	Conifer hedge	1.8	25 - 75					0	Early mature	Mixed species conifer hedge. Occasional brown patches.	10-20	C2	0.9	3	
T11	Lilac	2	150	1	0.5	1	1	1.5	Mature	Multi stem shrub. Pruned. Ivy.	5-15	C2	1.8	10	

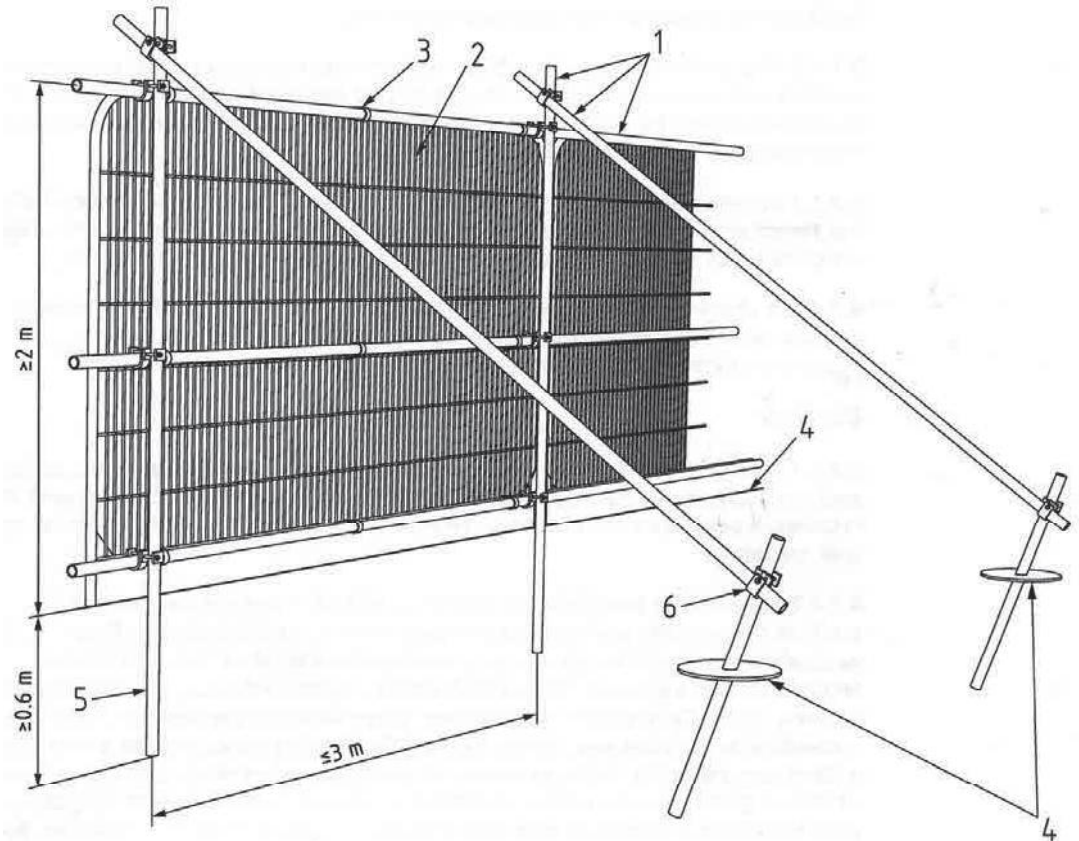
BS 5837:2012, Table 1 Cascade chart for tree quality assessment

Category and definition	Criteria (including subcategories where appropriate)	Identification on plan
Trees unsuitable for retention (see Note)		
Category U	<ul style="list-style-type: none"> 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 	See Table 2
<p><i>NOTE Category U trees can have existing or potential conservation value which it might be desirable to preserve; see 4.5.7.</i></p>		
<p>1 Mainly arboricultural qualities 2 Mainly landscape qualities 3 Mainly cultural values, including conservation</p>		
Trees to be considered for retention		
Category A	<p>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)</p>	See Table 2
<p>Trees of high quality with an estimated remaining life expectancy of at least 40 years</p>	<p>Trees, groups or woodlands of particular visual importance as arboricultural and/or landscape features</p>	<p>Trees, groups or woodlands of significant conservation, historical, commemorative or other value (e.g. veteran trees or wood-pasture)</p>
Category B	<p>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</p>	See Table 2
<p>Trees of moderate quality with an estimated remaining life expectancy of at least 20 years</p>	<p>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</p>	<p>Trees with material conservation or other cultural value</p>
Category C	<p>Unremarkable trees of very limited merit or such impaired condition that they do not qualify in higher categories</p>	See Table 2
<p>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</p>	<p>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</p>	<p>Trees with no material conservation or other cultural value</p>

Figure 2

Key

- 1 Standard scaffold poles
- 2 Heavy gauge 2 m galvanised tube and welded mesh infill panels
- 3 Panels secured to uprights and cross-members with wire ties
- 4 Ground level
- 5 Uprights driven into the ground until secure (minimum depth 0.6 m)
- 6 Standard scaffold clamps



Examples of above-ground stabilising systems

Figure 3a

Stabiliser strut with base plate secured with ground pins

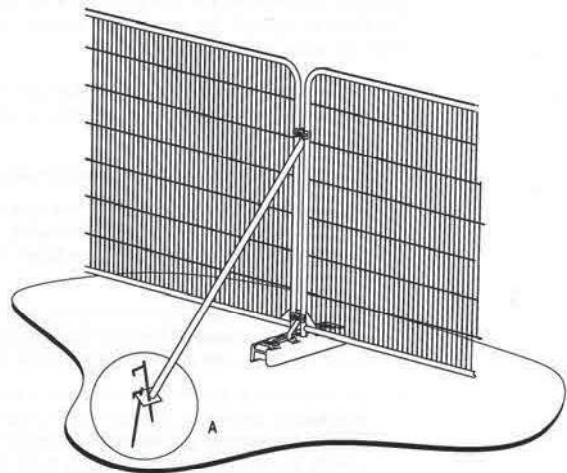
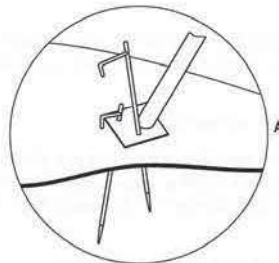
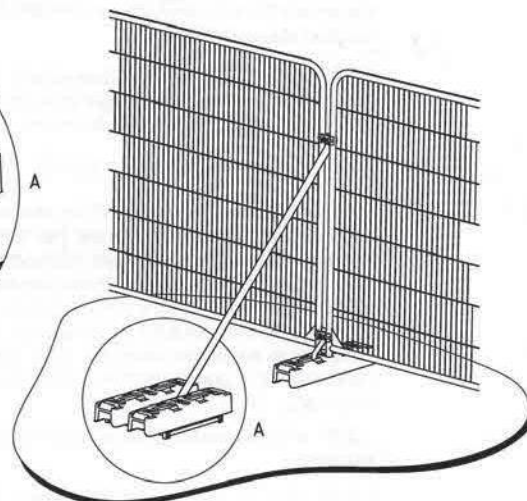
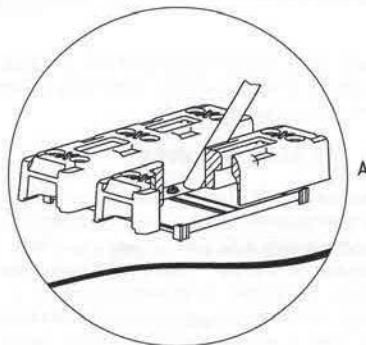


Figure 3b

Stabiliser strut mounted on block tray





Mature trees located to east side of driveway.
T3, Corsican pine
T4, Oak
T5, Beech



View of west side of house where new single storey extension is proposed.

Edelweiss

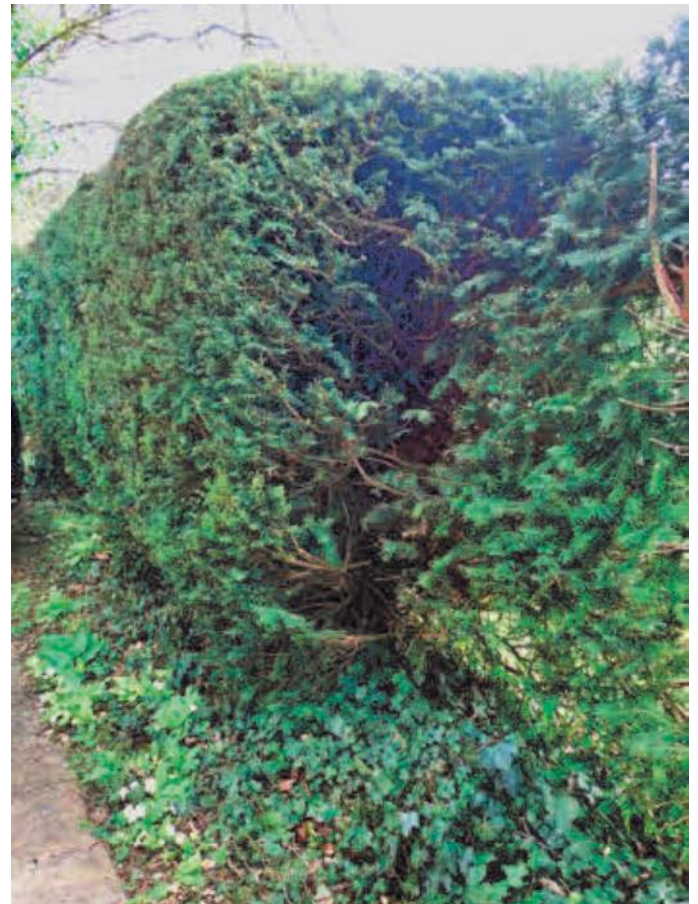
Appendix E



Low quality hedge, G6, along south side of site. Self sown sycamore, Leyland cypress and yew. The section of yew is providing a dense screen to the adjacent PROW, and has the potential to provide nesting sites. The other species will not thrive in shade conditions below mature tree canopies.



Thin section of G6 formed from tightly clipped Leyland cypress and sycamore stems.



Good quality section of G6 formed from yew.