



envirotech

Ecological Consultants
Environmental and Rural Chartered Surveyors

Client: Thomas Armstrong

Site: Land at Griffin Close
Frizington
Cumbria
CA26 3SH

Tree Survey and Impact Assessment

Prepared by
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CONTENTS

1. Site	2
a. Site Description	2
b. Survey Details	2
2. Existing Structures and Proposed Development	3
a. Existing Structures	3
b. Proposed Development	3
3. Tree Preservation Orders and Conservation Areas	3
a. Site Description	3
4. Tree Constraints	4
a. Overview	4
b. Proposed Development	4
c. Existing structures	5
5. Tree Constraints – Development	6
a. Protection measures	6
b. Suggested site guidelines	6
6. Tree Constraints - Proposed Development and Juxtaposition with Trees	7
7. Proposed Tree Planting	8
8. Scope of brief	8
9. Supporting Information	8
10. Conclusions	9
11. Recommendations	10
Appendix 1	
Appendix 2	
Appendix 3	
Appendix 4	
Appendix 5	
Appendix 6	

1. SITE

A. SITE DESCRIPTION

1. The survey site is comprised of the former landscaped grounds and boundaries of the former residential home site at Griffin Close, Frizington, Cumbria
2. Tree stock within the site is comprised of three linear groups, a cluster of three trees, three individual trees areas of shrub cover. All tree stock is located around or adjacent to the boundaries of the site.
3. The site is bounded by the public highway and dwellings to the east, the health centre grounds to the south, scrub / rough grass cover to the north and grazing land to the west.
4. See Appendix1, Appendix 2 and Appendix 3 for detailed tree list, site layout detail and images.

B. SURVEY DETAILS

1. The site was surveyed on 10/08/2022, tree heights were estimated via use of clinometer (Suunto PM-5), measurements of DBH taken at 1.5m height and crown spread was taken by ground measurements. Where access to trees was not possible, we have estimated tree sizes and conditions. The position of tree references within the site are taken from the topographic survey supplied to us. The site images were taken at survey date with Sony DCS-H400. Sun positions were estimated on site via Sun Surveyor software. Weather conditions were bright with full sun and no wind.
2. All surveying of tree stock on the site was carried out visually from the ground only. Where ivy cover was encountered on trees then only limited visual checking of structure and potential defects was possible.
3. At the time of surveying all trees were recorded on standard tree record sheets, see Appendix 1: Tree Schedule. Trees were surveyed throughout the entire site; detailed individual details were recorded for all significant trees within the existing site. Where larger numbers of smaller trees were encountered in the survey area these are included as a Group record which includes the approximate height range and maximum Diameter at Breast Height (DBH) of trees within the group, these groups are referred to by group i.e., Group 2 (G2).
4. The surveyed trees are categorized by the standard retention categories as defined in BS5837:2012. Such retention categories seek to inform the design process of trees which may be worthy of consideration for inclusion within the proposed development. All work recommendations relate to trees within the context of the current site layout and usage.

Note: the report and schedule recommendations form components of a development survey and are not intended to be used as a specific tree hazard assessment.

2. EXISTING STRUCTURES AND PROPOSED DEVELOPMENT

A. EXISTING STRUCTURES

1. At the time of the survey there are a no permanent structures within the site. Dwellings and a public highway are located adjacent to the site. Areas of hard surfaces associated with the former building are located within the site boundaries.

B. PROPOSED DEVELOPMENT

2. To the best of our knowledge the current development proposal undergoing design consideration is for construction of a residential development within the site boundaries.

3. TREE PRESERVATION ORDERS AND CONSERVATION AREAS

A. SITE DESCRIPTION

1. The site is not located within a Conservation Area. This designation confers a statutory protection upon all trees over 75mm in diameter.
2. We have conducted a check for the presence of Tree Preservation Orders (TPO) via the Copeland Borough Council Online mapping facility. This does not indicate any TPO being present within or adjacent to the site boundaries.
<https://copelandbc.maps.arcgis.com/apps/webappviewer/index.html?id=7222a5aa337542268f0d1a1c6af27cad>
3. The status of all trees within and adjacent to the site should be verified prior to works being undertaken on them.
4. It should be noted that trees located outside of maintained grounds and not covered by an active TPO are subject to the standard Felling License constraints imposed by the Forestry Commission. These regulations restrict the volume of timber which may be removed in a calendar quarter without a felling licence to 5 cubic metres.
5. Hedgerow regulations cover the protection of certain established ancient field boundary hedges.

4. TREE CONSTRAINTS

A. OVERVIEW

1. The need to survey and report on the condition and useful life expectancy of existing trees is intended to inform the design process and accompany a planning application for any proposed development.

B. PROPOSED DEVELOPMENT

1. As can be seen from Appendix 1; Tree Schedule, Appendix 2; Tree Location Plan and Appendix 3: Images; trees covered by this survey and report are distributed around the margins of the survey area.
2. Trees are detailed within Appendix 1 and are outlined as follows.
3. Tree T1 is an Ornamental Flowering Cherry, it is set within a small unsurfaced planting bed adjacent to the former access road and car park entrance. T1 is not a notable individual tree and should not significantly influence the layout of a development.
4. Group G1 extends along the western boundary of the site. It is primarily composed of a linear group of early mature Scots Pine with an under planting of juvenile to semi mature Beech, Hawthorn and Oak. This group forms established screening at the site boundary, we recommend that it is retained in any development of the site. Retention would be aided by the presence of existing hard surfaces to the east of a section of the group.
5. Tree reference T2 is an Ash in the early mature age class, it is divorced from G1 and located at the edge of the former access route and car park. It is not currently showing any visible signs of infection by Ash Dieback Disease. However, it does have a significant vertical rib / flaw on the lower stem below a point of stem division. This may indicate an historic internal split within the stem, if T2 were retained in a development it would require further detailed assessment of the structure and condition of the stem.
6. Tree T3 is a Goat Willow, it is set within the shrub group S1 which surround the eastern boundary of the site. It is likely that T3 established within the shrub border and was not a planted landscape tree. T3 should not influence the layout of a development as it is a relatively short-lived pioneer species.
7. Group G2 is a cluster of three Scots Pine in the northeast corner of the site. They are located on the upper level of a banking adjacent to the boundary of the site. Group G3 extends from below G2 westwards towards the western boundary. It forms a continuous linear group along the banking adjacent to the northern boundary of the site. G3 is predominantly composed of semi mature Oak, trees along the southern edge of the group have unbalanced crown forms but have better developed stems than those in the centre which have suppressed, spindly forms. G3 has a collective landscape value that would warrant retention in a development but would benefit from thinning.
8. Group G4 forms a section of the western boundary of the site to the north of G1. It is more akin to a lapsed hedgerow than a linear tree group with the main component being dense Goat Willow growth.
9. Shrub group S1 warps around the eastern and outer edges of the site, it is a dense, mixed ornamental shrub group and does not contain any tree stock other than T1 and

T3.

10. No other trees are located within or immediately adjacent to the site.

C. EXISTING STRUCTURES

1. As previously noted, there is not an existing structure within the site. Remnants of the hard landscaping associated with the former building remain along with a paved access route and a parking area. The latter two elements have restricted the root zones of T1, T2 and elements of group G2.

5. TREE CONSTRAINTS – DEVELOPMENT

A. PROTECTION MEASURES

1. Specific protection for individual trees and groups may be required within any development of the site.
2. The exact positioning of tree protection measures will be dependent upon the final proposed development layout and which trees are retained. Tree protection fencing would be required to be positioned outside of the plotted RPA radii of any retained trees as indicated in Appendix 2: Tree Location Plan.
3. As noted, tree protection could be set along the edge of the existing hard surfaced access route in relation to the central section of group G2. This is due to the existing tarmac surfaces forming an historic barrier to root development in this area of the site (as shown on Appendix2).
4. Protection for any retained hedges should be as that used for tree protection, an offset of 1m from the face of the hedge would allow the retention of suitable hedges.
5. The use of securely anchored Heras panels would serve to protect hedges around the development and act as site fencing, these would be to the specification detailed in BS 5837:2012 and located at the outer edge of surveyed RPA's.
6. The presence of extensive areas out with the surveyed RPA and crown extents would allow development of a large section of the site without impacts being placed upon any retained trees.

B. SUGGESTED SITE GUIDELINES

1. No fires within 10m of the crown of any retained trees.
2. Soil levels in rooting areas to be retained with minimal level changes, no greater than 300mm.
3. No cement mixing/washout to take place within 15m of any retained trees.
4. No chemicals, bitumen etc. to be stored within 10m of any retained trees.
5. Any spillage of fuel, chemicals or contaminated water occurring within 2m of the root protection areas to be reported to project supervisor.
6. Underground services may be safely routed outside the RPA of retained trees.

6. TREE CONSTRAINTS – DEVELOPMENT AREAS AND JUXTAPOSITION WITH TREES

1. Due to the nature of the site layout, the position of surveyed trees and the likely nature of a development, consideration of above and below ground constraints which may be imposed upon a development by retained trees is required.
2. The site is free from any notable tree constraints other than around its outer boundaries.
3. A development set within the central site would allow the retention of boundary trees along the western and northern boundaries.
4. The location of these groups should not create conflict with a development, and it should be possible to achieve separation to surveyed crown extents and built elements
5. No significant shading or overshadowing is present within the central areas of the site, no pressure for future tree removals would be created by a development within the site that is set back from the site boundaries.

7. PROPOSED TREE PLANTING

1. At the time of this survey a requirement for replacement planting has not been identified in direct relation to the proposed development.
2. A development which does not require the removal of any significant tree stock, and where tree planting forms part of any associated landscaping plan would represent an opportunity to increase the tree stock within the site.

8. SCOPE OF BRIEF

1. Carry out a survey of trees within the site in accordance with BS5837:2012 and collect data in order to advise the development designer of key issues relating to trees, with options and strategies. Prepare a Report with associated data, site plans and imagery, in order to facilitate consideration of the tree issues both for existing structures and the proposed development.

9. SUPPORTING INFORMATION

Site Plan: Supplied 1:250 @ A1

10. CONCLUSIONS

It is concluded that

1. The site and the surrounding land contain a limited number of individual trees and a number of groups of trees.
2. Apart from T1, T2 and T3 all trees are located around or adjacent to the northern and western boundaries of the site.
3. The central site is free from above or below ground tree constraints.
4. It is likely that T1, T3, S1 and possibly T2 would require removal within a development of the central site. This would not represent the loss of significant tree stock and their removal could be mitigated through replacement planting.
5. A development within the central areas of the site should allow the retention of boundary groups G1, G2 and G3. This would provide established landscaping, screening and boundary greening in a development.
- 6.
7. The location and size of trees around the site boundaries is such that no conflict with a development through shading or overshadowing would be created within the central areas of the site.

11. RECOMMENDATIONS

It is recommended that

1. The design and layout of any proposed development reflects the guidance contained within this report both for the management of trees for retention and the protection of same during the proposed development phase and that due consideration is given to the position of any development in relation to retained trees and the removal of trees which are unsuitable for long term retention from the site prior to any development.

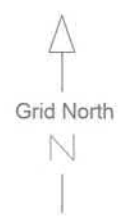
Type	Name	Age	DBH	Height	1stB	N	E	S	W	Cond	Life Exp	Comments	Recommendations / development	RPR m	RPA m ²	Category
T1	Prunus (Ornamental Flowering Cherry)	EM	270	5	2.5	4.5	4.5	4.5	4.5	Good	10+	Tree at edge of shrub border. Paving to 2 sides of tree, balanced crown form with minor volumes of deadwood	Limited retention value in any development	3.24	32.98	C2
T2	Fraxinus excelsior (Ash)	EM	480	12	3	4	5	6	5	Fair	10+	Tree located in grass area to W of access / parking, restricted root zone due to existing surfaces. Stem bifurcates at 2m with open Y formed union and thickening of stem. Slightly unbalanced crown form due to G1. Rib on E side of stem below bifurcation point indicates possible historic split in lower stem. No signs of Ash Dieback in crown	If retained, T2 would require monitoring of condition and inspection of lower stem condition	5.76	104.24	C2
G1	Pinus sylvestris (Scots Pine), Quercus petraea (Sessile Oak), Crataegus monogyna (Hawthorn), Fagus sylvatica (Beech)	EM	375	12	3.5	5.5	5.5	5.5	5.5	Mix	20+	Linear group along the majority of W boundary and area of grass cover. Restricted root zones in central area where G1 adjacent to access / parking. Interdependent slightly suppressed forms (exposed location). Occasional instances of historic branch failures. Young / dense planting of Oak, Beech and Hawthorn beneath Pines (DBH average 375mm)	Recommend retention in any development of site	4.5	63.63	B2
T3	Salix caprea (Goat Willow)	EM	310	5	2	3	3	3	3	Fair	10+	Tree located in shrub group on banking within walled border. Most likely to have self seeded / colonised shrub planting. (DBH at 500 mm height)	Limited retention value in any development	3.72	43.48	C2
G2	Pinus sylvestris (Scots Pine)	M	400	13	5	5	5	5	5	Fair	20+	Group of 3 Pines on upper banking. Deadwood present in lower areas of crown due to shading. 1 x dead Ash in centre of group. Dense ivy cover (DBH estimated).	Recommend retention in any development of site	4.8	72.39	B2
G3	Fagus sylvatica (Beech), Quercus petraea (Sessile Oak), Ilex aquifolium (Holly)	SM	270	10	3	4.5	4.5	4.5	4.5	Mix	20+	Close spaced group parallel to N boundary. Interdependent forms with outer trees having unbalanced crown development. Trees in centre of group are suppressed and have generally poor stem taper development (spindly)	Recommend retention in any development of site. Would benefit from thinning to select better trees	3.24	32.98	B2
G4	Salix caprea (Goat Willow), Crataegus monogyna (Hawthorn), Fagus sylvatica (Beech)	EM	150	6	1	1.5	1.5	1.5	1.5	Good	20+	Dense boundary group / unmaintained hedge. Willow is the dominant component	Recommend retention in any development of site	1.8	10.18	C2
S1	Mixed shrub group	M	50	2	0	1.5	1.5	1.5	1.5	Mix	10+	Established landscaping of mixed ornamental shrubs and ground cover	Limited retention value in any development	0.6	1.13	C2

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 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	<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 declineTrees 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 <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>			See Table 2
	1 Mainly arboricultural qualities	2 Mainly landscape qualities	3 Mainly cultural values, including conservation	
Trees to be considered for retention				
Category A Trees of high quality with an estimated remaining life expectancy of at least 40 years	Trees that are particularly good examples of their species, especially if rare or unusual; or those that are essential components of groups or formal or semi-formal arboricultural features (e.g. the dominant and/or principal trees within an avenue)	Trees, groups or woodlands of particular visual importance as arboricultural and/or landscape features	Trees, groups or woodlands of significant conservation, historical, commemorative or other value (e.g. veteran trees or wood-pasture)	See Table 2
Category B Trees of moderate quality with an estimated remaining life expectancy of at least 20 years	Trees that might be included in category A, but 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	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	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	Unremarkable trees of very limited merit or such impaired condition that they do not qualify in higher categories	Trees present in groups or woodlands, but without this conferring on them significantly greater collective landscape value; and/or trees offering low or only temporary/transient landscape benefits	Trees with no material conservation or other cultural value	See Table 2



Restricted root zones
(existing paving)



Tree Location Plan

Tree Locations by retention category	
Tree C	Tree B
Tree A	Tree D
Road Protection Area (radius)	
Category A	Category B
Category C	Category D
Restricted Root Protection Area (polygon)	
Surveyed Canopy Extents	
Estimated Shadow Plot (indusment)	

Project Title:
Griffin Close, Frizington
Date of Survey:
10/08/2022
Surveyor:
A. Wood
Date File Created:
23/08/2022
1:250

Prepared by
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Yew Tree and Gardens
For Envirotech NW Ltd

Note:
RPA only indicated for significant
trees. Small garden trees and
juvenile specimens may not be indicated
Retention Categories:
As defined in BS5837: 2012
RPA:
Plotted from individual RPA sheets.
Where restricted rooting conditions are present
RPA is also plotted as an area polygon

Legend

	Building		Gate		Steep Slope		Invert Level		Tree (unsurveyed)
	Barrier		Hedge		Spot height in metres		Lamp Post		Shrub
	Bottom of Bank		Kerb		Post Box		Manhole		Road Markings
	British Telecom		Kerb Top		Borehole		Marker		
	Concrete		Lake / Pond		Bus Stop		Roding Eye		
	Canopy		Marsh		Cable TV		Road Sign		
	Drop Kerb		Overhead Electricity Line		Electricity Pole		Stop Cock		
	Drain		Overhead Telephone Line		Earth Rod		Septic Tank		
	Fence		Ramp		Fire Hydrant		Survey Station		
	Flower Bed		Sign Post		Flag Pole		Sign Post		
	Fence - Birdsmouth		Tarmac		Gas Valve		Stop Valve		
	Fence - Security		Top of Bank		Gas Marker		Traffic Light		
	Fence - Wire		Verge		Gate Post		Telegraph Pole		
	Grass		Wall		Gully		Water Meter		
			Contours		Inspection Chamber		Tree (deciduous)		
							Tree (coniferous)		



SURVEY STATIONS MARKED WITH ROAD NAILS AND PEGS
WITH COORDINATES RELATING TO OSGB36 NATIONAL GRID

SITE LEVELS MARKED AT STATIONS RELATE TO
ORDNANCE DATUM OSGM15, VIA DIFFERENTIAL GPS.

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DRAWING REVISION RECORD			
No. Detail	DWG No.	Date	Intl.
1			
2			
3			
4			

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Site "GRIFFIN CLOSE"
FRIZINGTON

Drawing
TOPOGRAPHICAL SURVEY

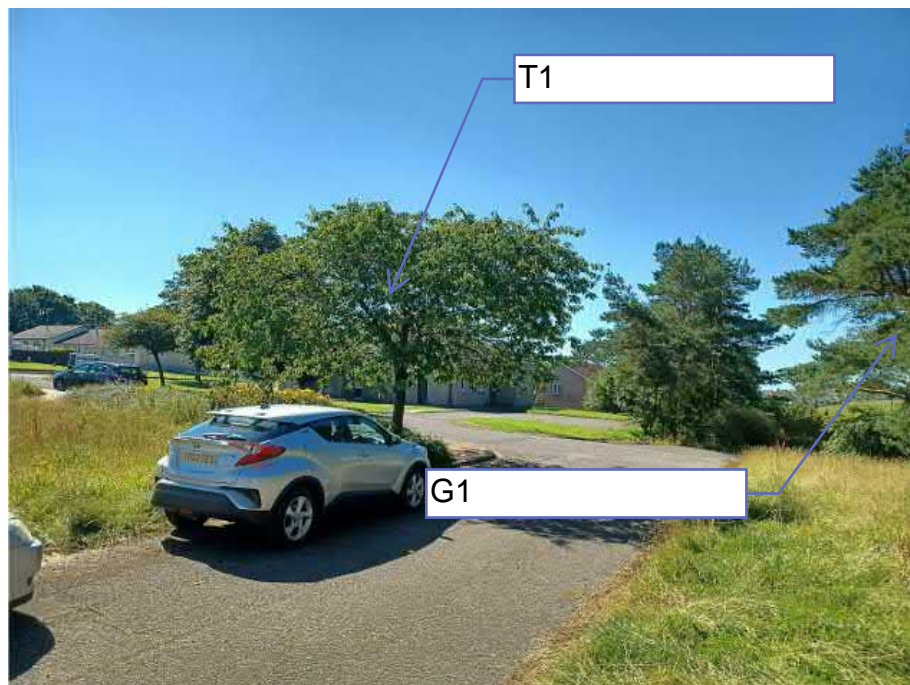
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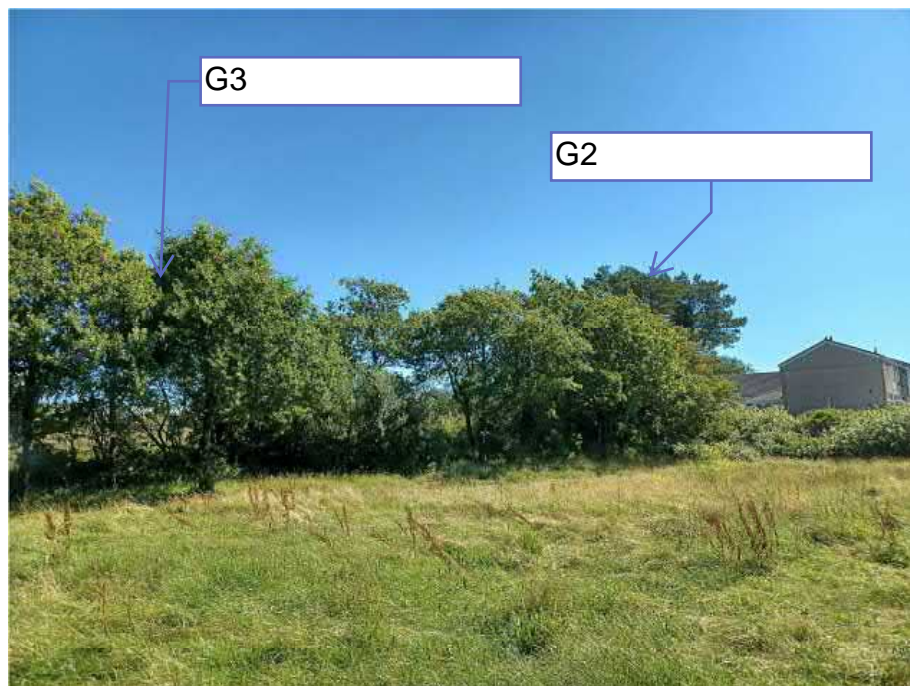
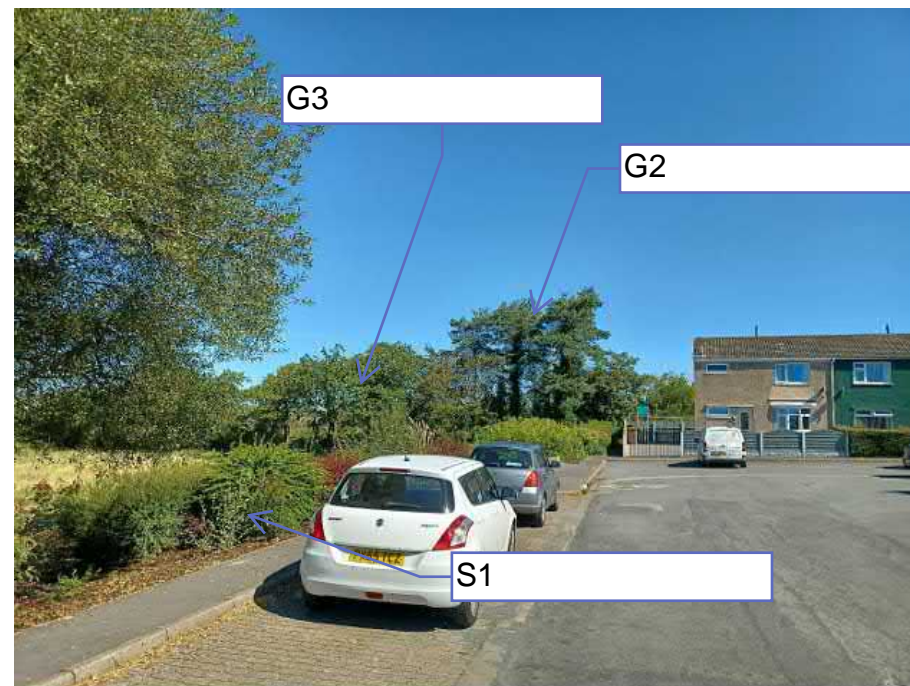


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APPENDIX 4

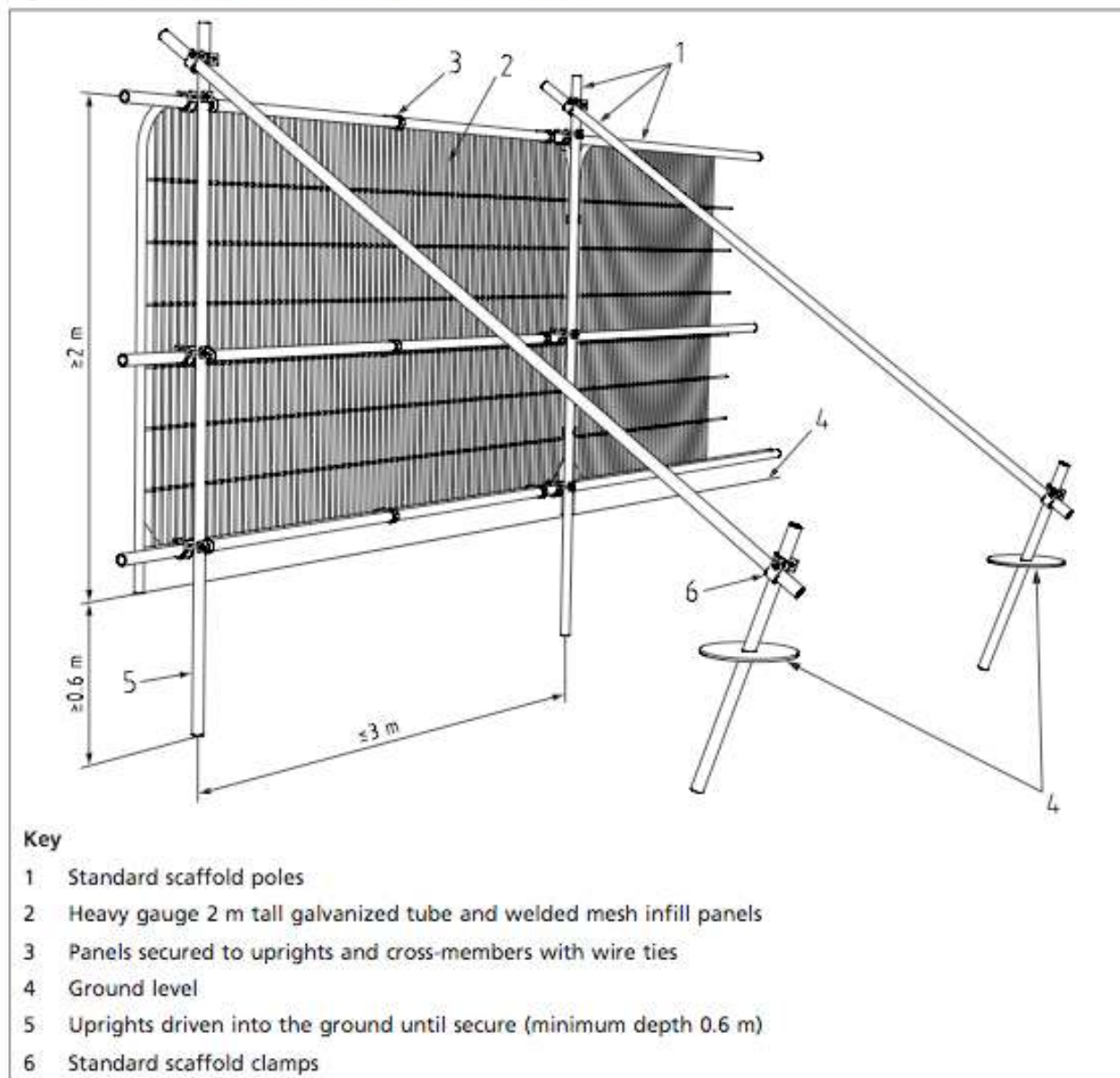
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Appendix 5 - Protective Fencing

Tree protective fencing

Figure 2 Default specification for protective barrier



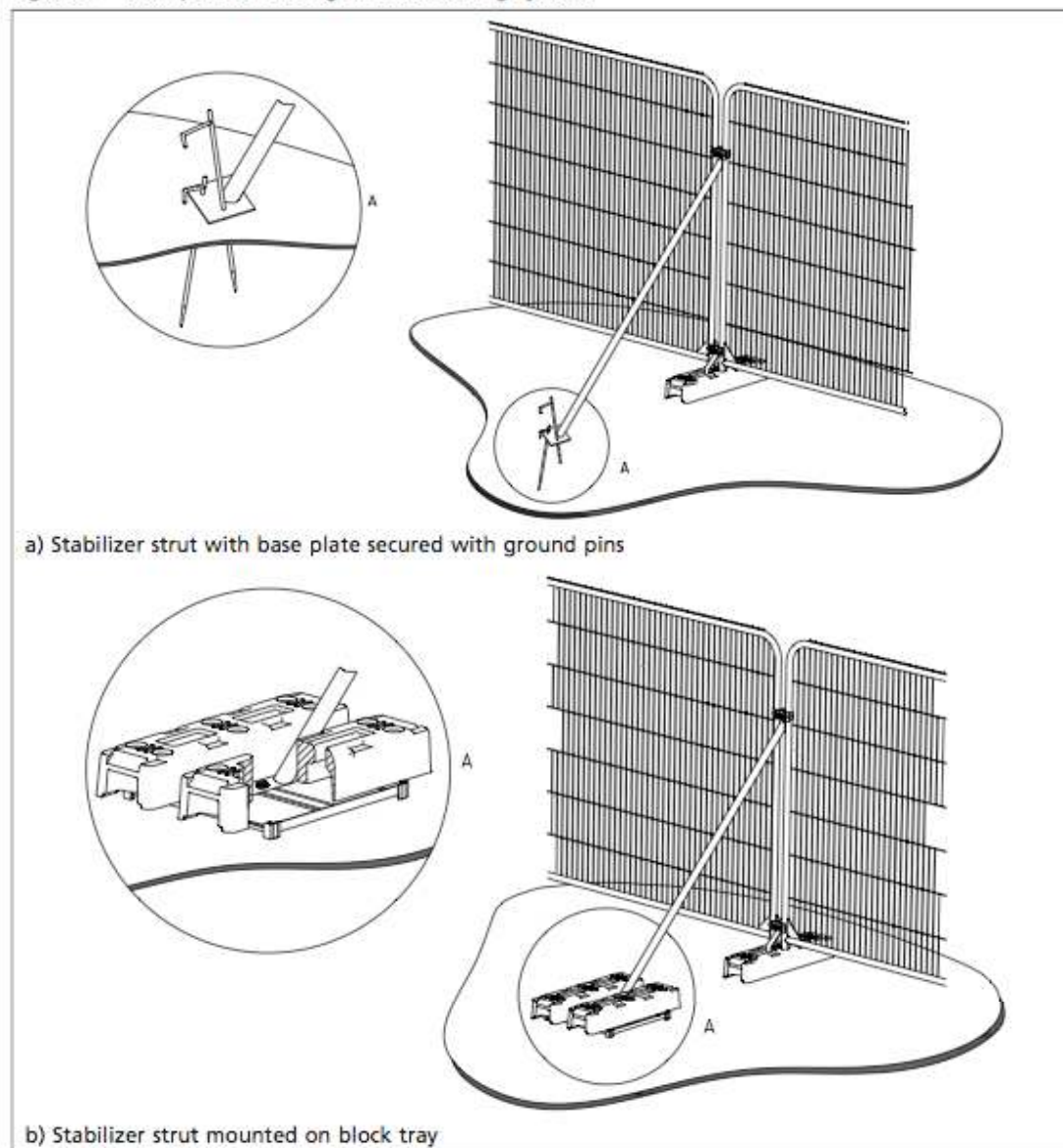
Appendix 5 - Protective Fencing

Tree protective fencing

BRITISH STANDARD

BS 5837:2012

Figure 3 Examples of above-ground stabilizing systems





**TREE PROTECTION
AREA**

KEEP OUT!

**ANY INCURSION INTO THE PROTECTED AREA MUST BE WITH THE
AGREEMENT OF THE LOCAL AUTHORITY OR ARBORICULTURAL
CONSULTANT**