
YEW TREE AND GARDENS

Client: W & T Danson
– Sandy Bay Caravan Park, Pilling Lane,
Preesall, Lancs,

ARBORICULTURAL IMPACT ASSESSMENT
FOR PROPOSED CARAVAN DEVELOPMENT

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ARBORICULTURAL IMPACT ASSESSMENT

1. SITE

A. SITE DESCRIPTION

1. The proposed development site is comprised of an area of permanent grass cover within the boundaries of the existing caravan site at Sandy Bay, Pilling Lane, Preesall, Lancashire.
2. The development area is as indicated in Appendix 5: Tree Constraints Plan and tree stock is as detailed within Appendix 1: Tree Schedule and Appendix 2: Tree Location Plan.
3. The survey area consists of a section of the current site which is currently an area of maintained permanent grass cover. It is bounded by the existing caravan park to the East, grazing land to the West the coastal embankment to the North and residential dwellings to the South.
4. Tree stock within the survey boundaries is limited and is comprised of two boundaries with planted linear groups, an area of colonisation by Willow / lapsed hedge in the Southwest corner of the site and an off-site group of trees / single mature Willow to the South. All trees are located around or adjacent to the boundaries of the site.

B. SURVEY DETAILS

1. The site was surveyed on 29/04/2021, 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. The position of tree references within the survey area are taken from the site plan supplied to ourselves, with any additional tree locations estimated from measurements obtained with a laser measure from physical reference points (site fences) during the site survey. Note: We are not land surveyors and any additional tree locations should be taken as indicative. All images were taken at the date with Fuji XT30. Sun positions were estimated on site via Sun Surveyor software. Weather conditions were clear with full sun and light to no winds.
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.
5. **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
6. Trees requiring removal to facilitate the proposed development, or which are unsuitable for retention are annotated in red on the Tree Constraints Plan and may be further identified in the work recommendation section of the Tree Schedule.

2. PROPOSED DEVELOPMENT

A. PROPOSED DEVELOPMENT

1. The proposed development layout is for the siting of several static caravan pitches with associated areas of hard / soft landscaping and an access route as illustrated in Appendix 5: Tree Constraints Plan.

3. TREE PRESERVATION ORDERS AND CONSERVATION AREAS

A. SITE DESCRIPTION

1. The site is not located within a Conservation Area.
2. We have undertaken a check of the online electronic information from Wyre Borough Council for Garstang, this does not list any Tree Preservation Orders with the site name. Reference: 08/06/2021
https://www.wyre.gov.uk/directory/18/tpo_summary_list/category/162
3. The status of all trees within and adjacent to the site boundaries should be verified to the undertaking of tree works or removals.
4. It should be noted that trees located outside of maintained grounds and not covered by an active TPO or conservation area 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 field boundary hedges.

4. IMPACT OF DEVELOPMENT ON TREE STOCK

A. CURRENT TREE STOCK

1. The current tree stock within the survey boundaries as defined by those trees within the area of the proposed development is detailed in Appendix 1 and outlined as follows.
2. Trees along the Southern boundary are located outside of the maintained areas of the site or within adjacent gardens.
3. T1 and group G1 are located along a shallow linear depression which may occasionally contain water. There does not appear to be any restriction to root development from the depression. Crowns from G1 extend over the site fence and group G2. This is a shrub group comprised of slightly overgrown Dogwoods (*Cornus alba*).
4. Tree reference T2 is a mature Crack Willow (*Salix fragilis*) located within the adjacent garden to the South of the boundary. It is in declining condition with significant volumes of aerial deadwood, a single limb extends over the site by 6m.
5. Group G3 and tree reference T3 are located in the Southwest corner of the site. G3 is a mixture of lapsed hedge and colonisation by younger trees / shrubby growth; T3 is a multi-stemmed Willow that has suffered significant stem failures.
6. Group G4 is a dense shrubby cluster of multi stemmed Goat Willows adjacent to the Western boundary.
7. Group G5 is a linear group along the Western boundary, it is comprised of close spaced Hybrid Black Poplars and small multi stemmed Willows. The group has been planted as boundary screening / shelter however the planting selection and spacing has resulted in poor development of individual trees.
8. With the exception of the tree at the Southern edge of the group, the close spacing has resulted in trees which are at the largest in the 200 to 250mm DBH range. Numerous trees are significantly smaller than this and have been suppressed to such an extent that they are either dead or with limited remaining live crown. Trees in G5 are likely to be at increasing risk of stem failures due to the combination of location and poor stem development.
9. Scattered Crack Willows are located along the outer edge of the group, these are small with multiple stems.
10. Group G6 is a continuation of the composition of G5. It has a slightly higher density of small (previously coppiced) Willows. The Poplars have been reduced in height but have not responded well to this with little regrowth occurring and decay forming in the remaining stems.
11. No other trees or hedges are located within the sphere of the development. All other trees and hedges are located in excess of 10m from the proposed development.

4. IMPACT OF DEVELOPMENT ON TREE STOCK (CONT.)

B. PROPOSED DEVELOPMENT

1. Trees which are within the zone of potential impacts from the proposed development illustrated in Appendix 5: Tree Constraints Plan (TCP) and are detailed as follows.
2. The proposed development would not impact upon the retention of any of the significant surveyed tree stock.
3. As identified in our site survey data and TCP, the proposed development has responded to the tree constraints imposed by trees along the site boundaries.
4. The proposed caravan plots adjacent to the Southern boundary have been located at the edge of the RPA and canopies of trees adjacent to this boundary. We recommend that T1 has its large overhanging limb reduced by 2m to limit the possibility of failure over the site. This will provide further clearance to the proposed caravan location.
5. The Dogwood group G2 may require pruning back to allow siting of the caravan in this area. This would not affect the long-term retention of this shrub group, particularly as the species responds well to regular pruning.
6. Trees in the Southwest corner of the site (T3, G3, G4) may be retained through standard protective fencing.
7. The proposed development will not directly require the removal of any trees from G5 or G6 as it is located outside or at the edge of the average maximum RPA of these groups. They may be retained through standard protective fencing.
8. We recommend that a programme of managed removal (thinning) of G5 is undertaken along with replacement planting. This would serve to remove the poorest trees from G5 and provide enhanced longer-term screening than that currently provided by G5.
9. Similarly to G5 we recommend that removal of the topped Poplar stems which have subsequently died is undertaken followed by replanting.
10. Suggested species are included in section 5d of this document.
11. No other trees are directly or indirectly affected by the proposed development.

5. SUGGESTED MITIGATION MEASURES

A. GUIDELINES

1. Guidance for the protection and retention of trees within the site.
2. Erection of protective fencing as indicated in Appendix 5: Tree Constraints Plan.
3. No material storage should take place in these areas.
4. No mixing of cement-based or other building materials should take place within the root protection area, no storage of fuels should take place within this area.
5. The tree protection must remain in place until work is completed and there is no risk to the RPAs
6. Once construction has been completed and the landscaping phase is complete the protective fencing may be removed.
7. No site-specific guidance required.

B. PROTECTIVE FENCING

1. Once erected all protective fencing will be regarded as sacrosanct and will remain in place until the completion of the construction phase. It shall not be removed, relocated or breached at any time without consultation with the project arboriculturalist.
2. Protective fencing will be constructed of robust barriers fit for the purpose of excluding construction traffic from root protection areas. Details of appropriate fencing types are included in Appendix 6.
3. Signs will be affixed to every third panel stating, 'Tree Protection Area Keep Out'. See Appendix 7 for example of signage.
4. All fencing will be securely affixed to avoid movement of fencing during the construction phase.
5. For the sections marked in purple on Appendix 5 fences will be constructed of site fencing of 'Heras' type which must be securely braced with additional measures to prevent movement of the fence during construction.
6. Indicative positions for protective fencing are indicated in purple on Appendix 5: Tree Constraints Plan.

5. SUGGESTED MITIGATION MEASURES (CONTINUED)

C. GENERAL PRINCIPLES TO AVOID DAMAGE TO TREES.

1. Protective fencing installed to prevent mechanical damage to trees adjacent to the development.
2. An indicative list of recommended practices during construction phase is listed below:
3. Once installed tree protection must remain in place and be observed at all times.
4. No fires within 10m of the crown of any retained trees.
5. Soil levels in rooting areas to be retained with minimal level changes, no greater increases than 300mm from existing levels.
6. No cement mixing/washout to take place within 15m of any retained trees.
7. No chemicals, bitumen etc. to be stored within 10m of any retained trees.
8. Any spillage of fuel, chemicals or contaminated water occurring within 2m of the root protection areas to be reported to project supervisor.
9. No additional underground services have been indicated to us at this time but they may be safely routed to avoid rooting zones, if additional services require routing through the root zones of trees for retention then appropriate sub surface or hand trenching methods should be used and guidance sought prior to any works being undertaken. See BS3857:2012.

D. MITIGATION PLANTING.

A specific landscaping plan has not been produced to accompany the proposed development.

As noted in Appendix 1 and section 5a we are of the opinion that the removal of the poorly structured and declining or suppressed Poplars from G5 and G6 should be accompanied by replacement planting. We would estimate that 30 – 40% of Poplars in G5 are suppressed and or in poor condition with the majority of 'topped' Poplars in G6 being in poor condition.

We suggest the following species / sizes.

Replacements for Poplars:

Alnus glutinosa (Alder)
Pinus nigra maritima (Corsican Pine)
Populus tremula (Aspen)
Quercus cerris (Turkey Oak)

All 8-10 cm standards except Pinus (10L)

Additional lower planting:

Ilex aquifolium (Holly)
Hippophae rhamnoides (Sea Buckthorn)
Ulex europeas Flore Pleno (Dwarf Gorse)

All 2L pots

6. CONCLUSION

1. The proposed development has responded to tree constraints and will not require the removal of any significant trees or groups of trees.
2. Mature trees to the South of the site may be retained and protected through the development. The proposed development should not lead to increased pressure for removals / tree works.
3. The proposed development is located outside of the root zones of the existing boundary tree groups.
4. Both G5 and G6 are of limited future retention value due to the condition / species and forms of trees within the groups. A programme of selective removals and replanting would enhance the screening and landscape value of these groups.
5. The proposed development would not lead to any overall increase in pressure for future tree works or removals over the existing site.
6. No other trees are impacted upon by the development and no significant future conflicts with retained trees have been identified.

7. RECOMMENDATIONS

It is recommended that

The management of the 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	RPR m	RPA m ²	Category
T1	Acer pseudoplatanus (Sycamore)	EM	485	14	3	6	6	6	6	Good	20+	Tree located to South of existing boundary fence, slightly divorced from group G1	Outside of development area	5.82	106.43	B2
G1	Acer pseudoplatanus (Sycamore), Salix fragilis (Crack Willow)	EM	300	16	2	7	7	7	7	Good	20+	Group located along Northern edge of ditch / depression. Mixture of Crack Willow of mainly multi stemmed forms and occasional Sycamore with generally poor stem taper development (spindly). Scattered smaller trees extend to North and South beneath canopies	Outside of development area	3.6	40.72	B2
G2	Cornus alba (Dogwood)	M	75	3.5	0	2	2	2	2	Good	10+	Dense shrub group, trimmed along outer face	Will require trimming / pruning in development	0.9	2.55	C2
T2	Salix fragilis (Crack Willow)	M	900	16	3	10	6	10	10	Poor	10+	Off site tree in adjacent garden (DBH estimated). Declining condition with multiple sections of aerial deadwood. 1 x large limb extends over site. Dense ivy on stem, smaller Sycamore growing through crown on N side of tree (DBH estimated at 220mm)	May be retained through standard protective fencing. Recommend 2m reduction of overhanging limb to reduce end weight and failure potential	10.8	366.48	C1
T3	Salix fragilis (Crack Willow)	M	520	12	2	10	10	6	2	Poor	10+	Low suppressed form, historic partial failure with stem to W having been removed. Remaining 2 stems are part failed with 1 x stem growing at 45deg to E and 1 x stem laying on ground	May be retained through standard protective fencing. Monitor condition for further failures in remaining stem	8.82	244.42	C1
G3	Acer pseudoplatanus (Sycamore), Crataegus monogyna (Hawthorn), Salix caprea (Goat Willow)	SM	200	8	1	2	2	2	2	Fair	20+	Dense group of scrubby growth, possible part of former hedge lined (lapsed)	May be retained through standard protective fencing. Recommend management through laying / trimming and additional planting to reinstate as hedge	2.4	18.1	C2
G4	Salix caprea (Goat Willow)	M	250	8	1	6	6	6	6	Good	10+	Cluster of low shrubby formed multi stemmed Goat Willows	May be retained through standard protective fencing. Recommend maintaining as group for boundary screening	3	28.28	C2
G5	Populus canadensis (Hybrid poplar), Salix fragilis (Crack Willow)	SM	250	17	2	6	6	6	6	Fair	10+	Linear group located along site boundary. Close spaced Poplars along fence line and smaller shrubby Willow to E. Poplars have typical interdependent forms with average stem diameters <250mm. Other than Southernmost tree, trees have poor stem taper ratios with many trees being very suppressed with DBH <200mm. A number of trees are either dead or of reduced vigour due to shading / competition	May be retained through standard protective fencing. Recommend removal of poor / suppressed and dead trees followed by replanting with mixed species to provide a more suitable long term boundary group. Maintain Willows as dense shrubby layer through cycle of coppicing	3	28.28	C2
G6	Populus canadensis (Hybrid poplar), Salix fragilis (Crack Willow)	SM	200	7	1	3.5	3.5	3.5	3.5	Poor	10+	Similar to G5 but Poplars have historically been 'topped' at 6m. Limited regrowth with significant number of trees now standing deadwood stems. Willows to front (S) are comprised of small diameter <120mm regrowth from previous coppicing	May be retained through standard protective fencing. Recommend removal of previously topped Poplar stems followed by replanting with mixed species to provide a more suitable long term boundary group. Maintain Willows as dense shrubby layer through cycle of coppicing	2.4	18.1	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 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 <p><i>NOTE</i> Category U trees can have existing or potential conservation value which it might be desirable to preserve; see 4.5.7.</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
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
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 material conservation or other cultural value
		See Table 2
		See Table 2





Tree Location Plan



<p>Tree Locations by retention category</p> <ul style="list-style-type: none"> Green Circle: Ret C1 Red Circle: Ret C2 Blue Circle: Ret C3 <p>Risk Protection Area (radius)</p> <ul style="list-style-type: none"> Green Circle: RPA Category A Blue Circle: RPA Category B Red Circle: RPA Category C Red Circle: Category U tree unsuitable for retention <p>Restricted Root Protection Area (polygon)</p> <ul style="list-style-type: none"> Blue Polygon: RPA <p>Survived Cemetery Elements</p> <ul style="list-style-type: none"> Green Circle: Cemetery Element <p>Estimated Shadow Plot (presummer)</p> <ul style="list-style-type: none"> Red Polygon: Shadow Plot <p>Tree Protection Fence</p> <ul style="list-style-type: none"> Blue Line: Tree Protection Fence 	<p>Project Title: Land at Sand Ln, Warton</p> <p>Date of Survey: 21/04/2020</p> <p>Surveyor: A. Wood</p> <p>Date File Created: 12/05/2020</p> <p>1:200</p> <p>Yew Tree & Garden Yew Tree House Hale Milnthorpe Cumbria LA7 7BJ 015395 63527 07813897631 info@yewtreegardens.co.uk www.yewtreegardens.co.uk</p> <p><small>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.</small></p>
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APPENDIX 4

Selected Reference List

The Body Language of Trees by Claus Mattheck & Helge Breloer (1994) London:HMSO.
Diagnosis of ill-health in trees by R.G. Strouts and T.G. Winter. (2000) London:HMSO
Principles of Tree Hazard Assessment and Management by David Lonsdale.(1999) HMSO
BS5837:2012 British Standards Institute
BS3998:2010 British Standards Institute
Trees Their Use, Management, Cultivation and Biology Robert Watson 2006
Tree roots in the built environment (Research for Amenity Trees) (2013) Arboricultural
Association
Law of Trees, Forests and Hedges
by Dr. Charles Mynors (Author) Sweet & Maxwell; 2nd Revised edition (14 Dec. 2011)
Assessment of Tree Forks, Assessment of Junctions For Risk Management by Dr. Duncan
Slater : Arboricultural Association (Nov 2016)
Collins Tree Guide by Owen Johnson (2006): Harper Collins, London

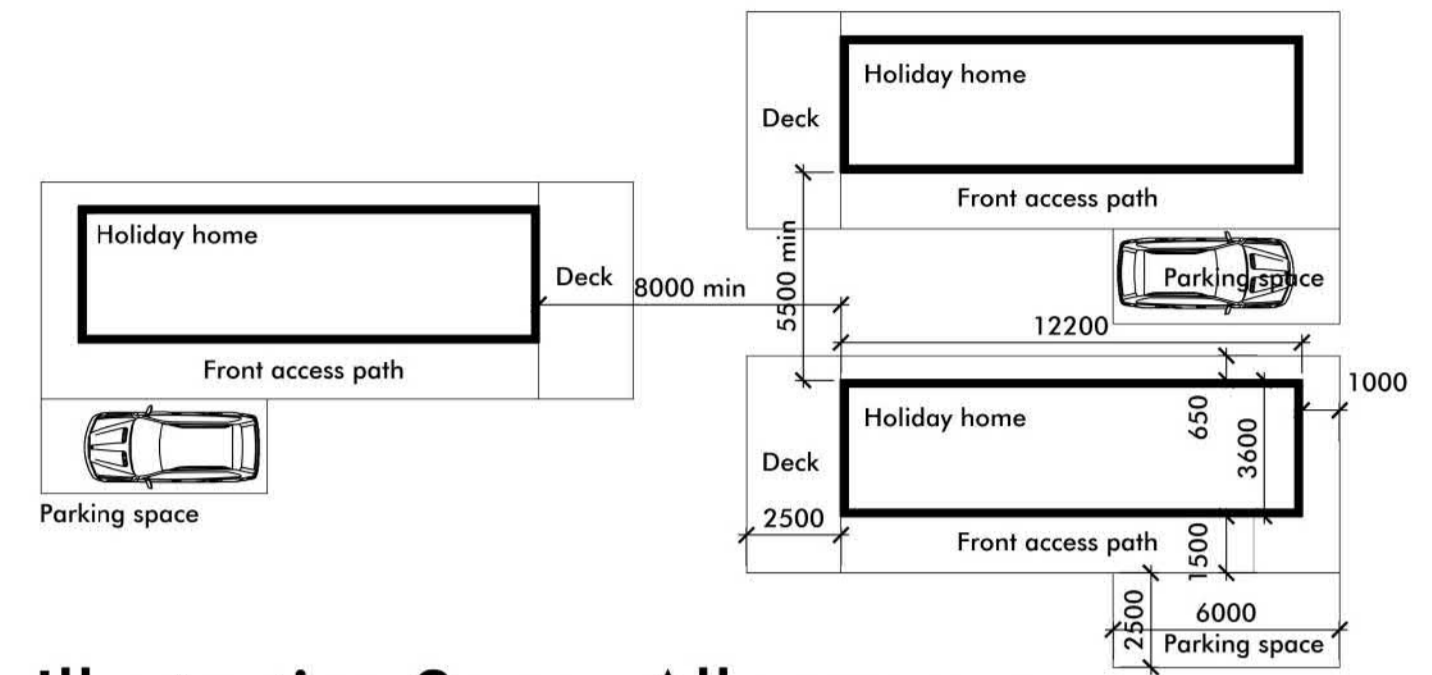


Existing holiday homes C & D to be re-orientated as illustrated

Note:
Development of 31 new holiday homes and relocation of existing homes A, B, C & D.
Total: 33

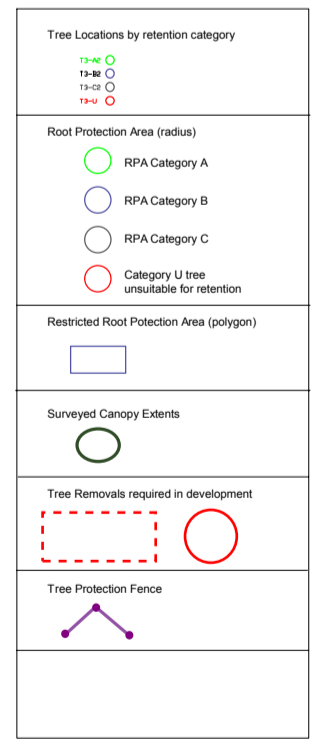
New access roads to be minimum 4m width with informal increases upto maximum 5.5m

Relocate holiday homes A & B



Illustrative Space Allowances
Scale 1:200

Tree Constraints Plan



Project Title: Sandy Bay Caravan
Date of Survey: 29/04/2021
Surveyor: A. Wood
Date File Created: 09/06/2021
Scale: 1:500

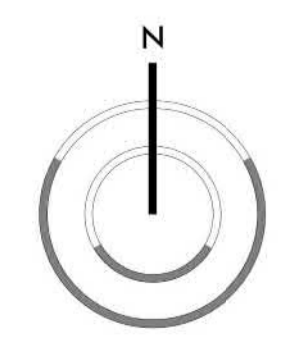
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Note:
RPA only indicated for significant trees. Small garden trees and juvenile specimens may not be indicated.
Retention Categories:
As defined in BS5837:2012
RPA:
Plotted from individual RPA sheets.
Where restricted rooting conditions are present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



Revision Notes:

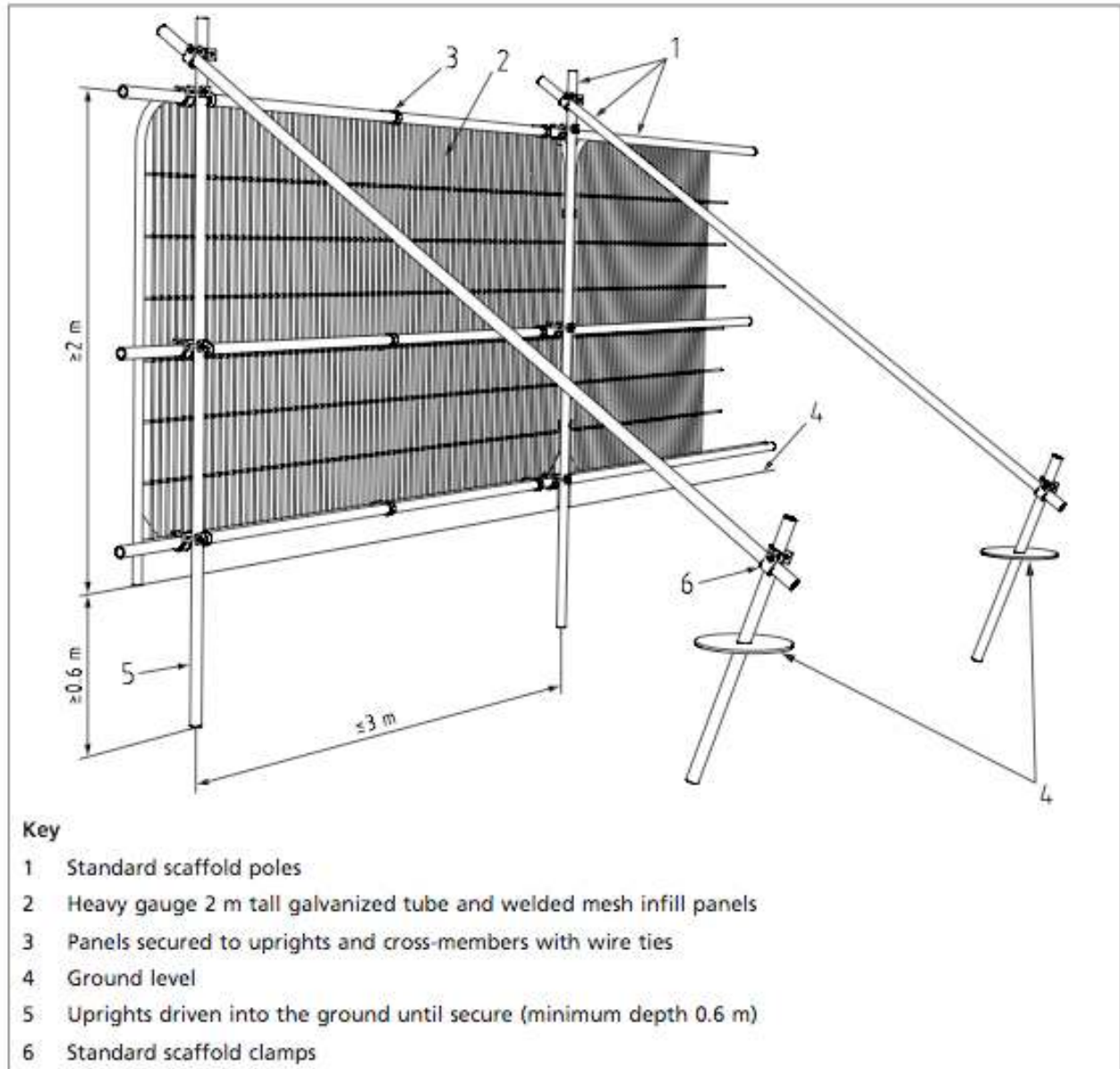
CLIENT	W & T Danson				
PROJECT	Proposed Further Development of Sandy Bay Caravan Park, 119 Pilling Lane, Preesall, FY6 0HG				
DRAWING	Proposed Site Layout				
DRAWN	ASL	DATE	23/04/21	NUMBER	20/119/P01
SCALE	1:500	SHEET	A1	REVISION	-



Appendix 6 - Protective Fencing

Tree protective fencing

Figure 2 Default specification for protective barrier



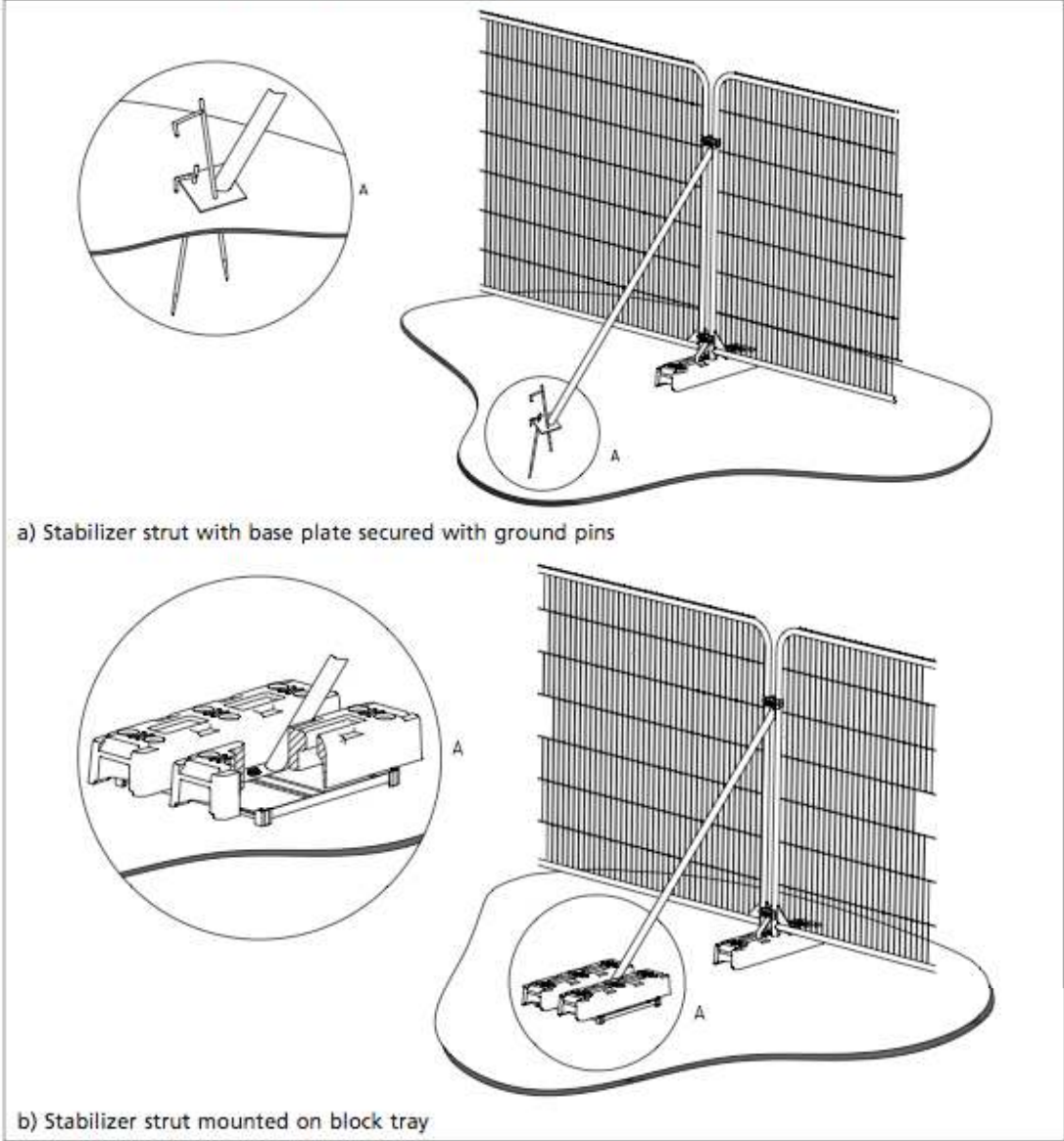
Appendix 6 - Protective Fencing

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**