

BS5837 Tree Survey Report & Arboricultural Impact Assessment

**Site: Hopehill Scout Campsite, South Street, Wrotham Rd.,
Meopham DA13 0QJ**

Prepared for: Gravesend District Scout Council

**Prepared by: Tree Craft Ltd, Hillside Farm, Rushmore Hill,
Knockholt, Kent, TN14 7NL.**

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TREE CRAFT

LTD.

ENVIRONMENTAL
ARBORICULTURE

EST 1990

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Summary

This tree survey report relates to proposed construction works at Hopehill Scout Campsite. The proposal involves the refurbishment and extension of the existing toilet/shower block in the centre of the campsite.

This report provides information and advice on the likely impact of the development proposals on the affected trees and, in accordance with British Standard 5837 (trees in relation to design, development, and construction), recommends appropriate measures to be taken in order to minimise the effect of development works on the trees.

The table below summarises the trees and hedges surveyed, their retention categories, and the numbers to be retained and removed:

	Total	Retained	Removed
Category C trees	6	6	0
Category C tree groups	3	3	0

Gravesham Borough Council does not currently publish a searchable Tree Preservation Order/Conservation Area map online; consequently, the authority will need to be contacted prior to any tree works commencing to check if any such protection applies to any trees within the site. It is the responsibility of any contractor working on these trees to carry out such statutory checks prior to undertaking works.

1. Introduction

- 1.1 **Instruction:** Tree Craft Ltd. have been instructed by Henson Appleby, on behalf of Gravesend District Scout Council, to carry out a tree survey and provide reports with regard to the development proposals outlined above.
- 1.2 **Scope of the report:** we are to survey, independently of the development proposals, all trees which may be affected by them, and:
- Record relevant information about the trees, in order to inform the design process.
 - Provide an arboricultural impact assessment evaluating the direct and indirect effect of the development proposals on retained trees and any impact which retained trees will have on the development, as well as recommending appropriate mitigation and protection measures.
- 1.3 **Documents provided:** the plans attached are derived from mapping data of the existing site, and from a proposed site layout plan, both provided by the project architect in January 2024.

2. Site assessment and observations

2.1 Site visit: A site visit and tree survey was undertaken on Friday 26th January 2024. The weather was clear, with sunshine. Deciduous trees were not in leaf at the time of the survey. Height and crown spread measurements were taken using a laser rangefinder, while stem diameters were measured using a forestry diameter tape.

2.2 Site description: The site currently comprises a single-storey, square building in the centre of the fields which make up much of the site, and with scrub/tree belts to the east and west. Two car park areas lie further to the west, connecting with South Street.

3 – Tree survey

3.1 Tree survey and constraints: The results of the tree survey are shown in the tree survey plan and schedule (**Appendix B**) and the tree protection plan (**Appendix C**). The number of trees in each retention category can be seen in the summary table at the beginning of this report.

3.1.1. The below ground constraints are generally summarised as the root protection areas (RPA). The RPA is an area equivalent to a circle with a radius 12 times the diameter of the trees measured at 1.5 metres for single stemmed trees. For trees with more than one stem, one of the two calculation methods below should be used where there are either 2 - 5 stems or 5 or more stems. In all cases, the stem diameter(s) should be measured in accordance with Annex C, and the RPA should be guided by Annex D of BS5837:2012.

3.1.2. The RPA is an area in which no ground works should be undertaken without due care in relation to the retained tree(s), in order to avoid soil compaction, changes in soil levels, or soil contamination, any of which could alter the tree(s) condition and/or stability. The shape of the RPA and its exact location will depend upon arboricultural considerations and ground conditions.

3.2 Retention categories: As stipulated in BS 5837, each tree has been allocated to one of four categories (A, B, C or U), which reflects its suitability as a material constraint on development. Whilst trees in categories 'A', 'B' and 'C' are all a material consideration in the development process, the retention of category 'C' trees, being of low quality or of only limited or short-term potential, will not normally be considered necessary where they impose a significant constraint on development. Furthermore, BS 5837 makes it clear that young trees, even those of good form and vitality, which have the potential to develop into quality specimens when mature "need not necessarily be a significant constraint on the site's potential".

BS5837:2012 sets out the methodology for surveying trees on potential development sites in order to identify them within a prioritised system of retention categories, as summarised below:

A Category	Trees of high quality and amenity value in such a condition at the time of the survey as to be able to make a significant amenity contribution for a minimum of 40 years.
B Category	Trees of moderate quality and amenity value in such a condition at the time of the survey as to make a significant amenity contribution for a minimum of 20 years.
C Category	Trees of low quality and amenity value in adequate condition at the time of the survey to make some amenity contribution for a minimum of 10 years, or young trees with a stem diameter less than 150 mm measured at 1.5 meters above ground level
U Category	Trees in such a condition that any existing value would be lost within 10 years. Such trees do not necessarily need to be removed as part of the project (unless for safety reasons) but do not impose any constraints on the project. For this reason, and in accordance with BS5837 practices, Category U trees, hedges, and groups are not marked with Root Protection Areas on the Tree Protection Plan.

Retention categories A, B and C are sub-divided into sub-categories 1 – 3, as summarised below:

Subcategory 1	Arboricultural value;
Subcategory 2	Landscaping value
Subcategory 3	Cultural and conservation value

The **Root Protection Area (RPA)** of each tree was determined using the calculation methods detailed in BS 5837: 2012 and plotted as a polygon which centres on the base of the stem. For groups, the RPAs have been calculated on the largest stem diameter with the group. For hedges, the RPAs have been extended to 1 metre beyond the crown spreads of the widest cardinal points. Where a tree crown extends beyond the RPA, allowance has been made to increase the extent of the RPA to include the canopy where relevant.

4.0 – Arboricultural Impact Assessment

4.1 Tree survey plan: The tree survey plan (**Appendix B**) is based on tree survey data recorded and plotted onto mapping data of the current site layout, and shows the existing trees, numbered and categorised in accordance with BS 5837:2012. Details of each tree surveyed are included in the tree schedule, part of Appendix B.

4.1.1 The Tree Protection Plan (**Appendix C**) is based on the tree survey data overlaid onto the proposed layout plan and shows the extent of the Root Protection Areas (RPAs) of the surveyed trees. Below ground constraints are represented by the RPA. The above ground constraints arise from the current and ultimate height and spread of the trees. An assessment of the Tree Protection Plan has determined the likely impact of the development proposals on the trees and vice-versa.

4.2 Trees to be removed: the current proposal does not require the removal of any trees.

4.2.1 Tree safety works: although a formal safety assessment of the trees was not within the scope of this survey/report no obvious tree safety defects were observed, or safety works identified as necessary, during the survey.

4.3 Incursions within the Root Protection Areas (RPAs) areas of retained trees: the proposed refurbishment and extension will not require incursions into the RPAs of any retained trees. However, the access route for vehicles/machinery will cross the Root Protection Areas of trees T5 and T6.

Machinery requirements for the project have yet to be finalised, but due to the proximity of trees T5 and T6 to the vehicle gate, via which machinery will cross the field in order to access the construction area, the incursions are relatively substantial as a percentage of the total Root Protection Areas (approximately 50% for T5, and 30% for T6). However, approximately half of each of these incursion areas lies beneath the existing car park to the west, the surface of which is a cellular concrete material, in-filled with aggregate or similar, and is well-established. Roots to the west of these trees will therefore be accustomed to the soil compaction beneath the car park, and protected by the existing surfacing.

The vulnerable parts of these Root Protection Areas are those within the soil in the gateway, and immediately to the east, at the edge of the field. It is therefore important that temporary ground protection (as specified at Section 4.10, below, and marked in green on the Tree Protection Plan at **Appendix C**) is installed within these incursion areas in order to prevent mechanical damage to the soil surface, and minimise soil compaction. For the same reason, it is also advisable to carry out construction works at a time of year when the soil is likely to be dry/firm, if possible.

If ground protection is installed as specified, and all other tree protection measures specified in this report observed in full, it is considered unlikely that these temporary incursions will have any adverse effect on the health and/or structural condition of trees T5 and T6.

No other retained trees will be affected by the project.

4.4 Underground apparatus: details of proposed service routes were not available at the time of writing. However, it is expected that services within the extension will be drawn from those present in the existing building – the requirement for new trenching routes is therefore not anticipated.

Should there be any plans for the installation of new underground service routes through the site, however, these must be analysed at the planning stage by the project arboriculturist if they may infringe the RPA of any retained tree.

4.5 Site access arrangements and compound/storage area: site access for construction plant and vehicles is to be via the route marked on the Tree Protection Plan, and must remain outside all protective fencing. To avoid the need for any crown-lifting works on other trees at the edges of the car park, taller vehicles accessing the construction site should follow the route exactly as marked on the Tree Protection Plan at **Appendix C**, ie through the centre part of the car park. Trees T5 and T6 have previously been crown lifted above the field gates, in order to permit vehicle access; minor, additional crown lifting may be needed if particularly tall vehicles/machinery need to access the construction area.

At the time of writing, the location of the site storage area had not been finalised. However, there is abundant space within the site, and outside all RPAs, for the anticipated storage requirements of the project to be accommodated.

Any site facilities and storage areas must be located outside all RPAs and all materials (especially fuel and cement) stored as far away from the RPAs as possible to reduce the risk of soil contamination from spillages.

4.6 Crown shadow: Shading by trees affects buildings and open spaces. This can be a problem where trees shade rooms to a building that require natural light. However, shading can also be desirable to reduce glare, solar heating or to provide cool place in the garden during hot weather. The shade cast by trees is therefore an important consideration in the design of the development.

4.6.1 In this case, the orientation of the site and the proposed non-residential usage of the building means that shading will not be an issue.

4.7 Tree works: aside from the potential need for minor crown lifting as detailed at Section 4.5, above, the project does not require any tree works.

4.8 Protective fencing: protective fencing shall be erected in the locations shown on the Tree Protection Plan (**Appendix C**) to provide construction exclusion zones within the RPAs of the retained trees on site. The fencing shall be ‘fit for purpose’ and as prescribed in section 6.2 (Figure 2) of British Standard 5837: 2012 (metal welded mesh panels secured with scaffold poles), as illustrated on the copy extract (**Appendix D**).

4.8.1 The construction exclusion zones (all RPAs, with the exception of the incursions for access detailed within this report), must be regarded as sacrosanct. Protective fencing is to be installed prior to construction works, plant or machinery arriving on site. The fencing

should remain intact throughout the duration of the development and only be removed upon completion of the project.

4.9 General protection measures for retained trees: It is important that measures for protection are in place throughout the development and for as long as a risk of damage remains. Particular care and planning is necessary with regard to the operation of machinery to ensure all plant movements and operations will not impact on any retained trees.

4.9.1 During construction, no materials shall be stored or dumped and no vehicular or plant movement will be permitted within the designated exclusion zones detailed at 4.8.1, in order to minimise the risk of damage to the trees from soil compaction. If any such compaction has occurred advice must be sought from the Project Arboriculturist.

4.9.2 All cement mixing and washing points for equipment and vehicles and fuel storage areas shall be outside the designated exclusion zones. No discharge of potential contaminants shall occur within the RPA of a retained tree or where there is a risk of run off into the RPA.

4.9.3 Fires on site shall be avoided if possible. Where they are unavoidable, they shall be located far enough away from all trees and hedges to prevent any potential risk of damage to the trees.

4.10 Ground protection: the area of the RPA marked for ground protection (shaded green on the Tree Protection Plan) must be covered with ground protection mats of a suitable load rating for the machinery required, with appropriate cushioning/load-bearing material incorporated in order to absorb the weight of vehicles/machinery and reduce soil compaction along the access route; this can then be removed following project completion. Any ground protection which both protects the soil surface from mechanical damage and spreads the weight of vehicles in order to minimise soil compaction will be suitable but, regardless of exact layout/design, must be specified with reference to the axle weight of the vehicles/machinery required for the project, once this is known.

4.11. Tree planting and subsidence risk: new tree planting is not proposed as part of the project; the site enjoys substantial, mature tree cover, none of which will be removed or otherwise affected by the project.

While a full assessment of direct damage and/or subsidence risk in relation to existing trees or future planting is not within the scope of this report, desktop research has indicated that the bedrock at the building location consists of chalk of the Lewes Nodular/Seaford/Newhaven Chalk Formations, with superficial deposits of clay, silt, sand, and gravel of the Clay-with-flints Formation. The subsoil consists of colluvium, beneath slightly-acid loam/clay surface soil.

Although samples would need to be taken if more precise information is required, it can be concluded that there is likely to be clay content within the soil/subsoil at the site, and that there is potential for clay deposits at bedrock level, with corresponding potential for vegetation-induced soil shrinkage causing subsidence in built structures.

This possibility will need to be considered if any new tree planting is planned, and when (in view of the existing trees' retention) when specifying foundation depth/type for the extension; such subsidence can be especially apparent when a building has been extended, as the old/new parts of the building often move in a different fashion from one another, and by differing amounts.

It is assumed that all structures are, where appropriate, compliant with relevant NHBC guidelines regarding proximity to trees on shrinkable soils.

4.12 Impact on local amenity and ecology: the project does not require the removal of any trees within the site, nor are any pruning works necessary aside from potential crown lifting work on trees T5 and T6. This may not be required, but if so will be very minor in scope, and will not affect the form, health, or longevity of these trees.

The incursions into the Root Protection Areas of these trees are essential for accessing the construction area, and can be adequately mitigated by ground protection as detailed in Sections 4.3 and 4.10.

No other trees within the site will be affected by the construction work or the site access, provided that the route marked on the Tree Protection Plan is used.

Provided that the recommendations in this report for the protection of the retained trees are followed, the project will therefore not have any detrimental impact on the local amenity from an arboricultural perspective, or affect the health and/or longevity of the retained trees.

5.0 References

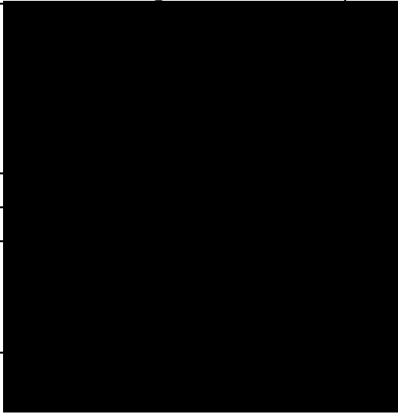
- British Standards Institution (2012) BS 5837: Trees in relation to design, demolition and construction – Recommendations
- National Joint Utilities Group 'Guidelines for the Planning, Installation and Maintenance of Utility Services in Proximity to Trees' (NJUG 10, Volume 4, 2007)
- British Standard 3998:2010 '*Tree work – Recommendations*'
- The Town and Country Planning Act 1990
- The Town and Country Planning (Tree Preservation) (England) Regulations 2012
- "The Body Language of Trees" by Claus Mattheck & Helge Breloer
- "Principles of Tree Hazard Assessment & Management" by David Lonsdale
- British Standard 5837: 2012 "Trees in Relation to Construction"
- British Standard BS3998: 2010 Tree Work – Recommendations
- BGS Geology Viewer
- UK Soil Observatory

6.0 Caveats and limitations of report

The limitations detailed below apply to this report;

- The survey and this report are concerned with the arboricultural aspects of the site only.
- The survey is restricted to trees that may be affected by the proposed development, regardless of whether or not they are within the site boundaries.
- The survey is based on a ground level tree assessment and examination of external features only – described as the ‘Visual Tree Assessment’ method expounded by Mattheck and Breloer (The Body Language of Trees, DoE booklet Research for Amenity Trees No. 4, 1994).
- Only trees of significant stature that were included in the supplied topographical survey were surveyed. In general, trees with a stem diameter at 1.5m above ground level of less than 75mm have been excluded unless they have particular merit that warrants comment. In general, woody shrub species are not included.
- No plant tissue samples were taken and no internal investigation of the trees was carried out. No soil samples were taken or soil analyses were carried out. The risk of tree-related subsidence to structures has not been assessed.
- The tree survey recommendations are valid for one year.
- No specific assessment of wildlife habitats has been carried out and this report does not consider these aspects.
- The inspection of the trees for the purposes of assessing their condition and work requirements is made on the basis that they will be annually inspected in the future to identify any changes in condition and review the original recommendations. For these reasons, the tree assessment advice only remains valid for one year from the date that the trees were last inspected.
- The arboricultural impact assessment has been based on the detailed site layout and design information provided by the client
- It is assumed that foundations will be constructed in accordance with National House Building Council Standards 2011, Part 4.2 ‘Building Near Trees’
- The health and condition of trees, as living organisms, may change rapidly, particularly as a result of unpredictable climatic events or human interference. The condition assessment of the trees is based on factors evident at time of inspection, and the inspector’s interpretation of these factors. Subsequent significant meteorological events or changes to the site (especially with regard to the soil) may affect the stability and conditions of the trees and therefore the validity of this report.

7.0 Review

Completed by		
Name	Signed	Date
Anthony McCarthy		01.02.2024
Name		Date
R. Arnold		

Appendix A: Survey Methodology

- The trees on the site were originally surveyed without reference to site layout.
- The position of each tree was originally plotted using GPS onto the supplied topographical plan. Where the tree location did not match that marked on the topographical plan, precise measurements from reference points on site were used in conjunction with the GPS in order to gain an accurate location.
- Small trees with a stem diameter less than 75mm were not surveyed.
- Each individual tree has been given a tree identification number. Metal tags have not been used for this survey. The tree numbers associated with each tree are cross referenced within the schedule and plans at Appendices B-D.
- The tree species have been recorded with common names.
- All tree heights and canopy spreads have been measured using a laser rangefinder. Tree heights are given in metres.
- All stem diameters were measured at 1.5 metres above ground level using a diameter tape, and are given in millimetres.
- The canopy heights are given in metres and are a measure of the height of the main canopy above ground level.
- With regard to age class the following approximations have been used:

Young	Out-planted trees that have not yet established
Early Mature	Established trees up to 1/3 of expected height and crown
Semi-Mature	Early mature: Between 1/3 and 2/3 of expected height and crown
Mature	Between 2/3 and full expected height and crown
Fully Mature	Full expected height and crown
Over Mature	Crown beginning to break-up and decrease in size

- The structural condition of the trees has been assessed and is summarised as:

Good	No defects apparent
Fair	Minor defects, unlikely to require remedial work in the short-term
Poor	Major defects, likely requiring significant remedial work in the short-term

- The physiological condition has been recorded to provide an indication of the tree's general health and vitality. The trees have been described thus:

Good	Healthy and with no symptoms of significant disease.
Fair	Disease/stress present or vitality is slightly impaired.
Poor	Disease/stress present and vitality significantly impaired
Dead	

- The crown, main stem(s), and roots (where visible) of each tree or group were individually assessed.
- General comments have been made where appropriate.
- Estimated remaining contribution has been categorised as: less than 10 years, 10-20 years, 20-40 years or over 40 years, based upon an assessment of each tree or group's useful remaining life expectancy

Everstie
Bungalow



Hopehill
Scout Camp

Amhurst

T6

©

T

G3

C

**G1
C**

T1
C

° G2

xc

T2

T3

T4
C

1

Category 'A'

Category 'B'

Category 'C'

Category 'U'

 Toilet/Shower Block Building

 Car Park - Hard Surface Log/Timber Store [approximate] Buildings

BS5837:2012 Tree Survey

Client: Gravesend District Scout Council
 Project: Hopehill Campsite - Extension Project
 Survey Date: 26/01/2024
 Surveyor: Anthony McCarthy



Tree Craft Ltd

Unit 16, Hillside Farm
 Rushmore Hill
 Knockholt
 Kent
 TN14 7NL
 consultancy@treecraft.co.uk

Tree and Tag No Species		Hght (m)	Stems		Crown		Age	RP A (m²) R (m)	Phys Condition	Structural Condition	Preliminary Recommendations		Cat ERC
			No	Ø (mm)	Spread (m)	Clear (m)					Survey Comment		
G1													
Cherry plum <i>Prunus cerasifera</i>		6	1	140	N	4	2	M	A: 8.9 R: 1.68	Good	C: Fair S: Fair B: Fair	No action :: No action	C.2
					E	3.5	0					Group of approximately 4 no. cherry plum trees forming north-western corner of woodland/scrub boundary between fields, with understorey of bramble and young yew. Suppressed to east and south, with all growth heavily biased to north and west. Dense ivy on lower stems.	10 to 20 yrs
					S	4	6						
					W	3.5	4						
G2													
Damson <i>Prunus insititia</i>		6	1	125	N	3.5	6	M	A: 7.1 R: 1.5	Fair	C: Fair S: Ivy B:	No action :: No action	C.2
					E	2	3					Approximately 4 no. trees growing beneath crown of adjacent ash T1. Heavy suppression to north, with growth biased mostly to south. Very dense ivy and undergrowth obstructing view of lower stems.	10 to 20 yrs
					S	3.5	2						
					W	2	4						
G3													
Mixed species		16	1	435	N	7	1.5	M	A: 85.6 R: 5.21	Fair	C: Fair S: Fair B: Fair	No action :: No action	C.2
					E	21	2					Mixed deciduous tree belt. Largest trees 2 no. mature ash in eastern part of group, with remainder consisting of mature birch, wild cherry, and further ash to west, and semi-mature hawthorn, prunus sp., and sorbus sp.	10 to 20 yrs
					S	7	3						
					W	21	3						
Age Classifications:		N	Newly planted	EM	Early Mature		Condition:		C	Crown	Stems: Ø Diameter		
		Y	Young	M	Mature				S	Stem	(Eq) Equivalent stem diameter using BS5837:2012 definition		
		SM	Semi-mature	OM	Over Mature				B	Basal area	ERC: Estimated Remaining Contributio		

Tree and Tag No Species	Hght (m)	Stems		Crown		Age	RP A (m²) R (m)	Phys Condition	Structural Condition	Preliminary Recommendations		Cat ERC
		No	Ø (mm)	Spread (m)	Clear (m)					Survey Comment		
T1												
Common Ash <i>Fraxinus excelsior</i>	15	1	310	N	4	8	SM	A: 43.5 R: 3.72	Fair	C: Fair S: Ivy B: Fair	No action :: No action	C.1
				E	2	9					Within tree/scrub belt between fields. Understorey of privet, bramble, and young hawthorn beneath. Lower stem ivy-covered, and some suppression on eastern side of crown.	10 to 20 yrs
				S	5	4						
				W	5	3.5						
T2												
Lawson Cypress <i>Chamaecyparis lawsoniana</i>	13	1	320	N	3	2	M	A: 46.3 R: 3.83	Fair	C: Fair S: Good B: Good	No action :: No action	C.1.2
				E	2.5	0					Northern tree in mature windbreak row separating fields. Suppression on southern side of crown.	10 to 20 yrs
				S	1.5	0						
				W	2.5	0						
T3												
Common Ash <i>Fraxinus excelsior</i>	14	2	489 (Eq)	N	6	2.5	M	A: 108.3 R: 5.87	Fair	C: Fair S: Fair B: Fair	No action :: No action	C.1
				E	5	6					Codominant union at 1 metre. Slight suppression on eastern side of crown.	10 to 20 yrs
				S	7	3						
				W	6	4						
T4												
Silver Birch <i>Betula pendula</i>	17	1	630	N	6	4	M	A: 179.6 R: 7.56	Good	C: Good S: Fair B: Good	No action :: No action	C.1
				E	7	4					Lower stem swept in easterly direction, correcting in crown. Large surface roots visible around rootplate.	10 to 20 yrs
				S	7	4						
				W	7	4						
T5												
Sycamore <i>Acer pseudoplatanus</i>	13	1	265	N	3	4	SM	A: 31.8 R: 3.18	Fair	C: Fair S: Fair B: Fair	No action :: No action	C.1
				E	4	4					Part of boundary group growing at eastern edge of car park, in raised soil strip between car park surfacing to west and field to east. Immediately to south of vehicle gate into field, with surface roots growing across gateway. Heavy suppression in southern side of crown.	10 to 20 yrs
				S	1	8						
				W	3.5	4						
Age Classifications: N Newly planted EM Early Mature Condition: C Crown Stems: Ø Diameter												
	Y Young		M Mature				S Stem				(Eq) Equivalent stem diameter using BS5837:2012 definition	
	SM Semi-mature		OM Over Mature				B Basal area				ERC: Estimated Remaining Contributio	

Tree and Tag No Species		Hght (m)	Stems		Crown		Age	RP A (m²) R (m)	Phys Condition	Structural Condition	Preliminary Recommendations	Cat ERC	
			No	Ø (mm)	Spread (m)	Clear (m)					Survey Comment		
T6													
Sycamore		13	1	185	N	1	11	SM	A: 15.5	Fair	C: Fair	No action :: No action	C.1
Acer pseudoplatanus					E	2.5	4		R: 2.22		S: Fair	Immediately to north of vehicle gate into field. Crown slightly sparse, with suppression on northern and southern sides. Small area of cracked, raised bark on western side of stem at 1.5 metres. Large, southern surface root growing across gateway.	10 to 20 yrs
					S	1.5	9				B: Fair		
					W	1.5	7						

Hopehill Campsite

SCALE :
1 : 450

@ A3

DATE :
01/02/2024

MAP FILENAME :
BS5837 Tree Protection Plan

Map data shown may contain Ordnance Survey © products supplied by
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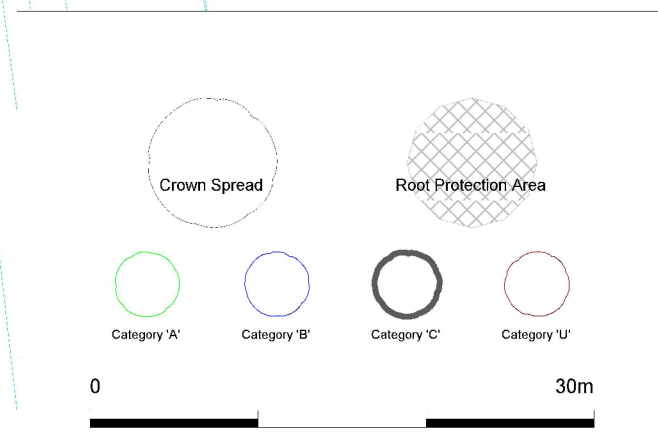
Everstie
Bungalow

Amhurst

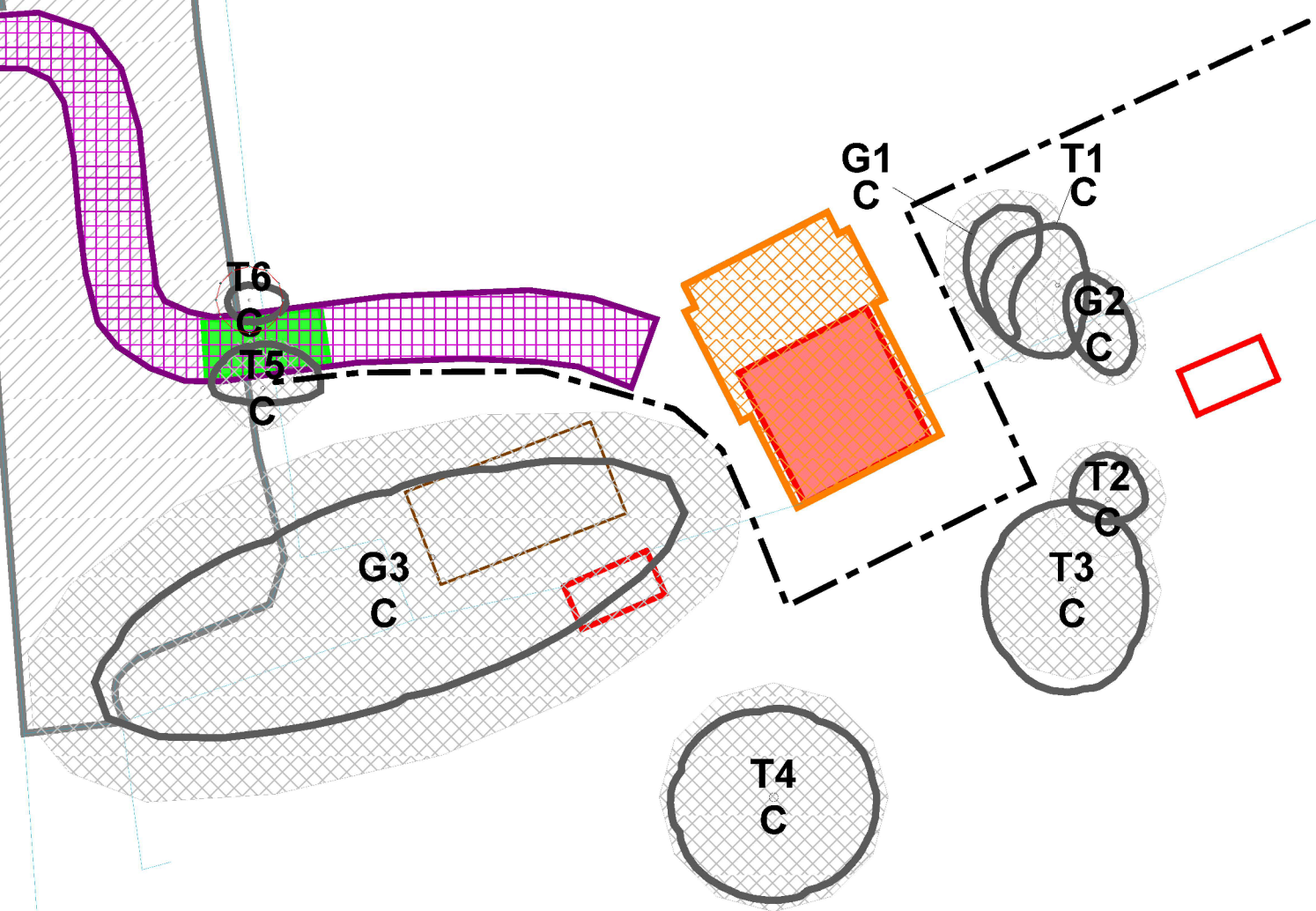
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Appendix C

Hopehill
Scout Camp



- Existing Toilet/Shower Block Building
- Proposed Extended/Refurbished Building
- Car Park - Hard Surface
- Log/Timber Store [approximate]
- Ground Protection
- Site Access Route
- Buildings
- Protective Fencing



APPENDIX D – PROTECTIVE FENCING

Figure 2 Default specification for protective barrier

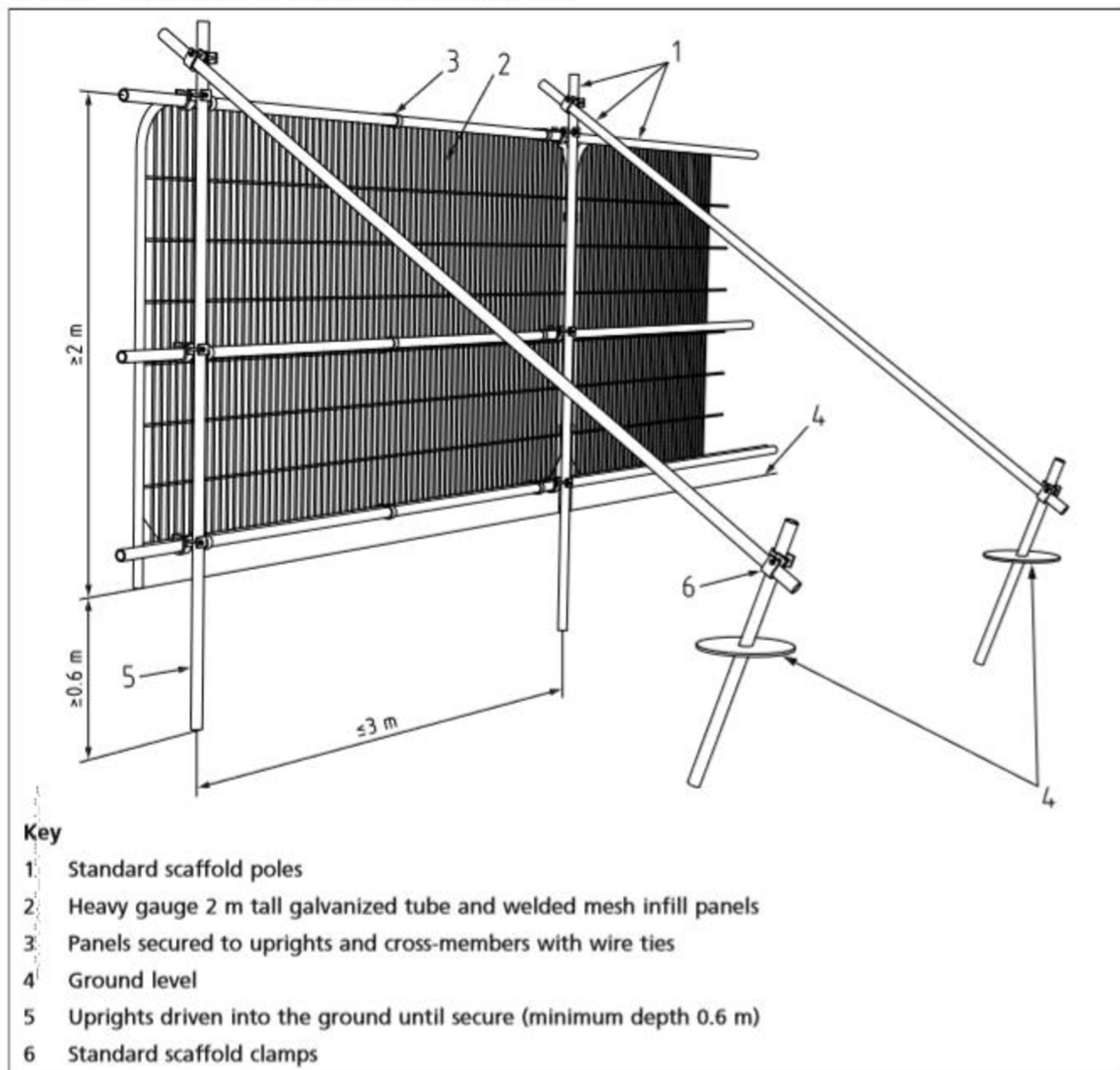


Figure 3 Examples of above-ground stabilizing systems

