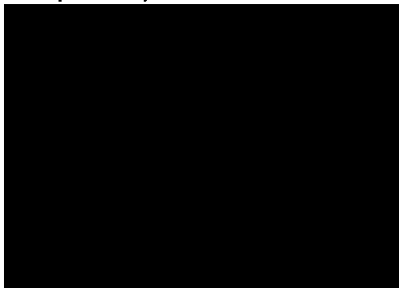

YEW TREE AND GARDENS

**Client: The Duchy of Lancaster
– Former Garage Site,
Dunsop Bridge, Clitheroe, Lancashire.**

**ARBORICULTURAL IMPACT ASSESSMENT
FOR PROPOSED BARN CONVERSIONS**

Prepared by



ARBORICULTURAL IMPACT ASSESSMENT

1. SITE

A. SITE DESCRIPTION

1. The proposed development site is comprised of the existing buildings, access and grounds surrounding a former garage premises located at Dunsop Bridge, Clitheroe, Lancashire.
2. The development area is as indicated in Appendix 2: Tree Location Plan and tree stock is as detailed within Appendix 1: Tree Schedule and Appendix 5: Tree Constraints Plan
3. The survey area consists of the immediate surroundings of the existing garage site, the margins of a public car park and the adjacent areas of maintained gardens grounds.
4. Tree stock within the survey boundaries is comprised of a mixture of native and non native species. The age class of trees within the survey area is predominantly semi to early mature with tree stock being mainly located within the car park and the maintained gardens. Hedges form the boundaries of a number of sections of the site.
5. The survey site is bounded by the recreation field to the west and north, further areas of car park to the east and a public highway to the south.

B. SURVEY DETAILS

1. The site was surveyed on 25/02/2022, tree heights were estimated via use of a clinometer (Suunto PM-5), measurements of DBH taken at 1.5m height and crown spread was taken by ground measurements. Images were taken at the time of the site survey with a Samsun A32 camera. The position of tree references within the site are taken from the client supplied topographic survey. Sun positions were estimated on site via Sun Surveyor software. Weather conditions were bright with full sun and light to 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 data was 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 creation of a community hub building on the site of the garage with associated alterations to the surrounding landscaping, ancillary structures / services and an enlargement to the car park and areas of hard and soft landscaping.

3. TREE PRESERVATION ORDERS AND CONSERVATION AREAS

A. SITE DESCRIPTION

1. The site is not located within a Conservation Area.
2. We have conducted check via the online list published by Ribble Valley Council for the presence of any TPO (Tree Preservation Order), the online list does not reference any active TPO's within or adjacent to the development site.
https://www.ribblevalley.gov.uk/downloads/download/7878/tree_preservation_orders_tpo
3. No TPO's are indicated either within or adjacent to the site. 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 10 metres of the proposed development is comprised as follows.
Tree species, conditions and retention values are detailed in Appendix 1: Tree Schedule and outlined below.
2. The eastern section of the survey area contains six trees located in the maintained areas of the car park. These trees, T1, T2 and group G3 are all amenity / landscape trees in the early mature to mature age classes (dependent upon species).
3. The northern boundary of the survey area is marked by a hedge reference H1, this hedge is relatively young in age and appears to have been planted in relation to the recreation field / car park. Two trees are located to the east of H1 in the boundary of the car park, these are a mature Crack Willow (T5) and a mature Goat Willow (T6).
4. Tree stock around the boundaries of the former garage site is limited. It is comprised of a short section of unmaintained hedge (H2) and a group of Cherry Laurel (G1). Hedge H1 continues along the northern boundary until it meets the residential gardens to the west.
5. Trees within and around the maintained gardens are comprised of a number of shrubs, an early mature Beech (T3) and Copper Beech (T4) and a cluster of smaller trees (G2). A section of maintained Beech Hedge forms the western boundary of the garden areas.
6. No other trees are located within the zone of the proposed development. Further trees are located around the eastern margins of the car park but these are over 14m from the closest point of 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 are detailed as follows.
2. Hedge H1 will require removal to form the widened vehicle access route /car park and community outdoor space.
3. Tree references T1, T2, hedge H2 and group G1 will require removal in order to enlarge the car parking area and form the community outdoor space.
4. Group G2 will require removal in order to construct the plant room and relocate the garden boundary line
5. All other tree references may be retained within the proposed development. The trees which will require removal are not of significant individual value or notable collective value, their removal could be mitigated by appropriate replacement planting.
6. T3, T4 and H3 can be retained through the use of standard protective fencing. The indicated position of a single ground source bore hole is shown in the outer edge of the RPA of T3. If it is not possible to adjust the location then any minor impact upon T3 can be mitigated / minimised by suitable working methods as detailed in section 5D of this document.
7. Group G3 is located within the existing car park landscaping, it has restricted root zones to the north and east due to the current car park and access route. The proposed alteration of the access route will require a minor incursion into the RAP of a single tree, impacts can be minimised / mitigated by following the working methods in section 5D.
8. Similarly, the formation of the access to the enlarged car park makes a minor incursion of approximately 16m² into the RPA of T5 and 6m² into the RPA of T6. As these represent an incursion 2.5% and 11% respectively; this may be accommodated through initial hand digging as per section 5D. Given the location of existing surfaces and relative levels it would not be feasible to use 'no dig' systems for construction.
9. The proposed development should not lead to an increase in pressure for future tree removals and no significant conflict in relation to shading / overshadowing are indicated. The relationship between trees, structures and outdoor spaces would be largely unchanged from the current site. Tree reference T6 may require crown lifting of the lowest two to three branches to provide clearance at the new car park entrance.

5. SUGGESTED MITIGATION MEASURES

A. GUIDELINES

1. Outline 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 protected 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. Specific guidance as 5d.

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 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 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 Location 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. HAND DIG WORKING IN THREE AREAS OF THE SITE (MAGENTA SHADING) APPENDIX 5

1. Initial excavation within the RPA identified in the TCP shall at all times be by methods detailed below.
2. Installation of the tree protection fencing at the location shown in TCP.
3. Given the nature of the site and the presence of existing hard surfaces no additional ground protection should be required. All working areas should be approached from outside the RPA.
4. Marking of the edges of the hand excavation areas with securely driven posts or steel road pins and site barrier mesh.
5. Clearing of vegetation and upper horizon of topsoil to a maximum depth of 600mm or finished depth. Any roots encountered at this depth should be treated as follows:
 6. If any roots under 25mm are encountered, they may be careful target pruned.
 7. Where roots over 50mm in diameter are encountered the default position should be retention and relocation where possible. If possible, any roots over 25mm shall be carefully hand excavated, moisture retained by wrapping in damp hessian, roots then to be repositioned to outside edge of excavated area and covered with clean topsoil, if necessary the excavated edge shall be carefully enlarged to allow the repositioning and relocation of roots. If repositioning is not possible then pruning to a suitable lateral root should be undertaken. All pruning equipment (secateurs, loppers, pull saws) should be disinfected prior to use.
8. Once the excavation has taken place, if cement-based products are used we recommend that the outside edge of excavation line should be lined with an impermeable membrane i.e. Visqueen sheet. If underground services are to be installed then an appropriate root barrier should be used to the manufacturers specification.
9. Tree protection fencing to be maintained in the indicated position through development phase.
10. Any materials storage and all concrete mixing will take place outside the RPA and will be transported into the RPA for final use.

E. MITIGATION PLANTING.

A specific landscaping plan has not been supplied to us at this time.

The proposed layout includes sections of hedge planting and tree planting. This would provide mitigation for the removals required in the proposed development.

6. CONCLUSION

1. The proposed development layout will not require the removal of any trees of significant retention values.
2. The proposed access route, the community outdoor space and the enlarged car park will require the removal of two trees, a group of shrubs and two sections of hedge.
3. A group of smaller garden trees will require removal in the alteration of the garden boundaries and the construction of the service building.
4. None of the tree removals are of notable individual trees, the hedges requiring removal are of a relatively young / even aged composition.
5. All other tree and hedge references may be retained in the proposed development. Specific working methods will be required in relation to the retention of trees
6. Areas of hand working will be required in order to minimise any disturbance of root zones. This is predominantly focused on the alterations to the car park and formation of the additional car parking area.
7. The proposed development plan includes a volume of indicative tree and hedge planting. This would provide suitable mitigation for the tree removals required in the development.
8. The layout and nature of the proposed development is such that no future above ground conflict with retained trees will be created by the development.

7. 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	RPR m	RPA m ²	Category
T1	Sorbus aucuparia (Rowan)	M	275	7	2.5	3	3	2	3	Fair	10+	Multi stemmed from 3m with fastigate form. Some areas of bark damage on lower stem (strimmer). Unbalanced due to T2	Will require removal in development	3.3	34.22	C2
T2	Betula pendula (Silver Birch)	EM	220	9	3	2	4	4	4	Fair	10+	Unbalanced crown form due to T1, exposed roots and associated strimmer damage	Will require removal in development	2.64	21.9	C2
H1	Crataegus monogyna (Hawthorn), Corylus avellana (Hazel)	EM	120	2.5	0	0.5	0.5	0.5	0.5	Fair	10+	Mixed hedge appears to be circa 20 years in age, flail trimmed and requiring laying to prevent formation hedge with all growth above 1m	Will require removal in development	1.44	6.52	C2
H2	Crataegus monogyna (Hawthorn), Prunus spinosa (Blackthorn)	EM	100	5	0	0.5	0.5	0.5	0.5	Fair	10+	Short section of unmanaged hedge to N of residential garden, 'gappy' and overgrown. Hedge in garden is maintained	Will require removal in development	1.2	4.52	C2
G1	Prunus laurocerasus (Cherry Laurel)	M	100	4	1.5	1	1	1	1	Poor	10+	Group of Cherry Laurel, historic absence of management, recently topped at 4m	Will require removal in development	1.2	4.52	C2
T3	Fagus sylvatica (Beech)	EM	630	12	3.5	7.5	7.5	7.5	7.5	Good	20+	Located in corner of garden, stem bifurcates at 2m, small decay pocket beneath main union	Retain and protect in development. Small section of hand digging required for borehole	7.56	179.58	B2
G2	Rhododendron, Ilex aquifolium (Holly), Malus sylvestris (Crab Apple)	EM	240	7	0	2.5	2.5	2.5	2.5	Fair	10+	Dense interdependent formed group, variegated Holly is largest tree	Will require removal in development	2.88	26.06	C2
T4	Fagus sylvatica 'Purpurea' (Copper Beech)	EM	345	7.5	2	4	4	4	4	Good	20+	Single tree with balanced crown form, previous crown lifting with some stub cutting	Retain and protect in development	4.14	53.85	B2
G3	Betula pendula (Silver Birch), Betula pubescens (Downy Birch), Quercus cerris (Turkey Oak)	EM	335	10	3	4	4	4	4	Good	20+	Scattered linear group in grass verge forming the N edge of public car park. Less evidence of strimmer damage than T1/T2	Retain and protect in development. Small section of hand digging required	4.02	50.78	B2
T5	Salix fragilis (Crack Willow)	M	1150	22	7	9	9	9	9	Fair	10+	Large multi stemmed tree forming part of group at E edge of car park. Previous failures in crown typical of species / age	Retain and protect in development. Small section of hand digging required	13.8	598.36	B1
T6	Salix caprea (Goat Willow)	M	200	10	3	3	1	1	6	Fair	10+	Multi stemmed tree growing on boundary beneath crown of T5. Unbalanced form due to influence of T5, no access to stem due to dense scrub cover (DBH estimated)	Retain and protect in development. Will require pruning in relation to new car park entrance	4.15	54.11	C2
H3	Fagus sylvatica (Beech)	M	150	2	0	0.5	0.5	0.5	0.5	Good	10+	Maintained garden boundary hedge (DBH estimated at base)	Retain and protect in development	1.8	10.18	C2

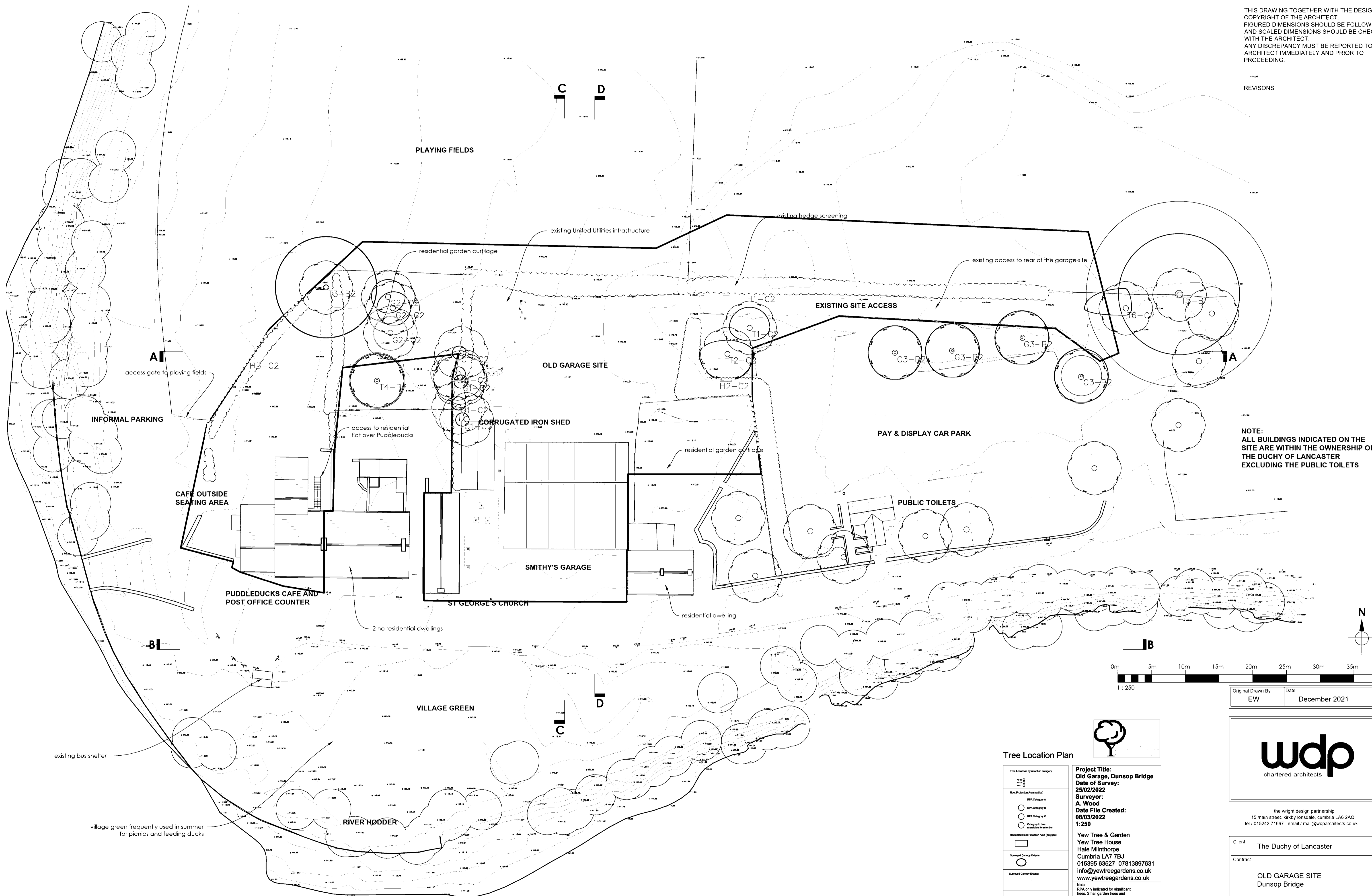
Table 1 Cascade chart for tree quality assessment

Category and definition	Criteria (including subcategories where appropriate)			Identification on plan
Trees unsuitable for retention (see Note)				
	<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	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

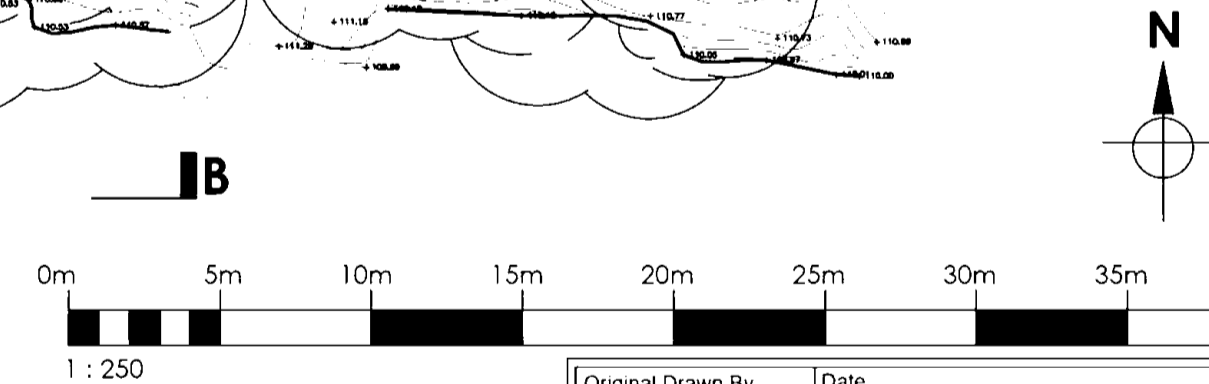


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REVISIONS



NOTE:
ALL BUILDINGS INDICATED ON THE SITE ARE WITHIN THE OWNERSHIP OF THE DUCHY OF LANCASTER EXCLUDING THE PUBLIC TOILETS



Original Drawn By EW	Date December 2021
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Tree Location Plan

<p>Tree Location by retention category</p> <ul style="list-style-type: none"> Tree O Tree D Tree C 	<p>Project Title: Old Garage, Dunsop Bridge Date of Survey: 25/02/2022 Surveyor: A. Wood Date File Created: 08/03/2022 1:250</p>
<p>Roof Protection Area (Detail)</p> <ul style="list-style-type: none"> RPA Category A RPA Category B RPA Category C Category U (see instructions for retention) 	<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>
<p>Hatched Roof Protection Area (polygon)</p> <p>Surveyed Canopy Extents</p> <p>Unsurveyed Canopy Extents</p>	



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Client The Duchy of Lancaster
Contract OLD GARAGE SITE Dunsop Bridge

Drawing title
EXISTING SITE LAYOUT

Scale 1:250	Job No KL2887	Dwg No 101
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Appendix 3: Site images

Old Garage Dunsop Bridge

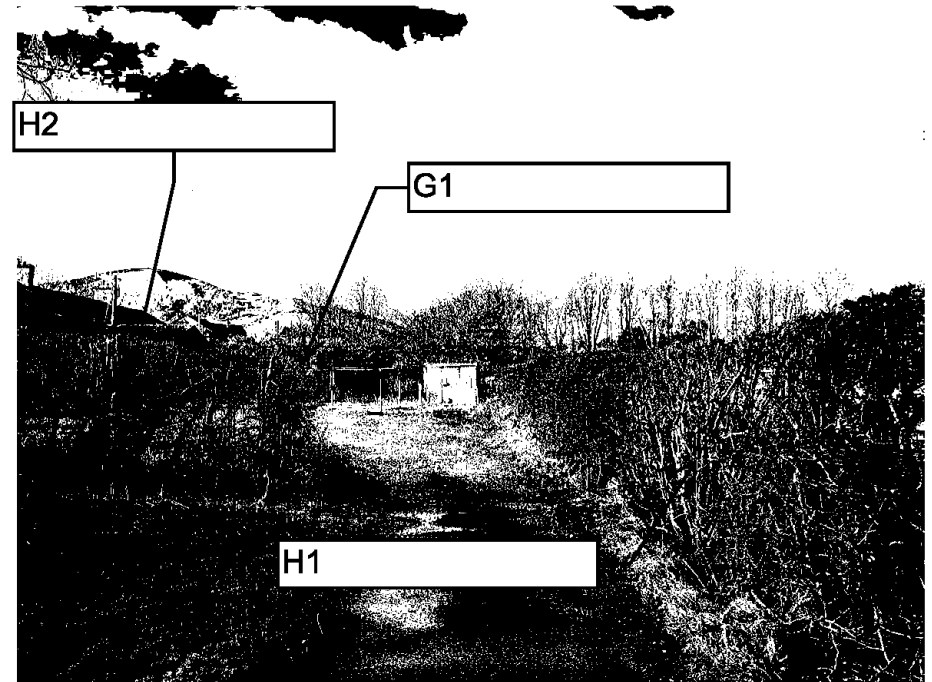


Image date: 25/02/2022

Appendix 3: Site images

Old Garage Dunsop Bridge

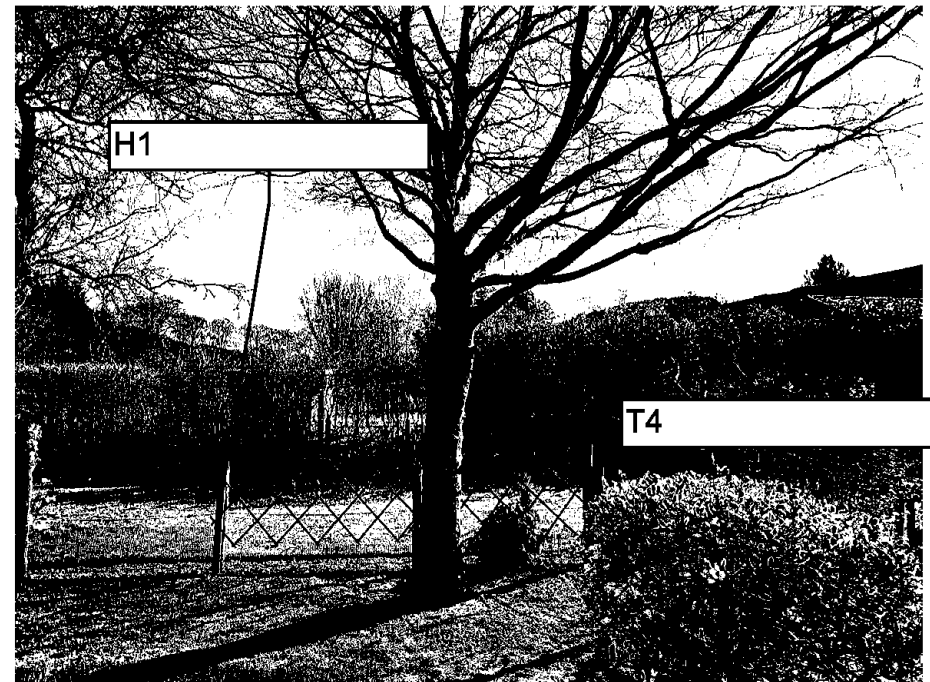
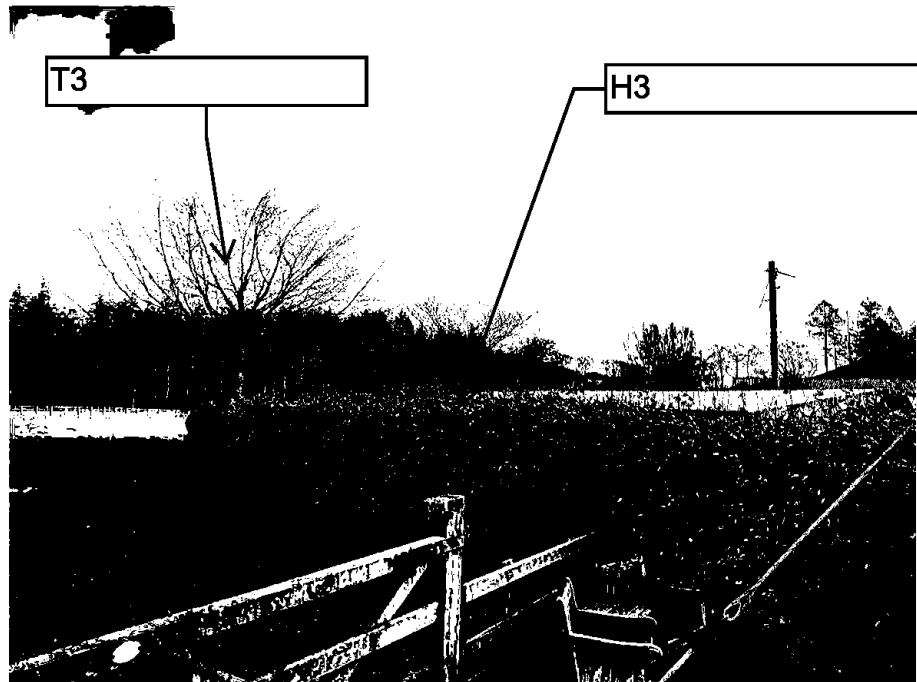
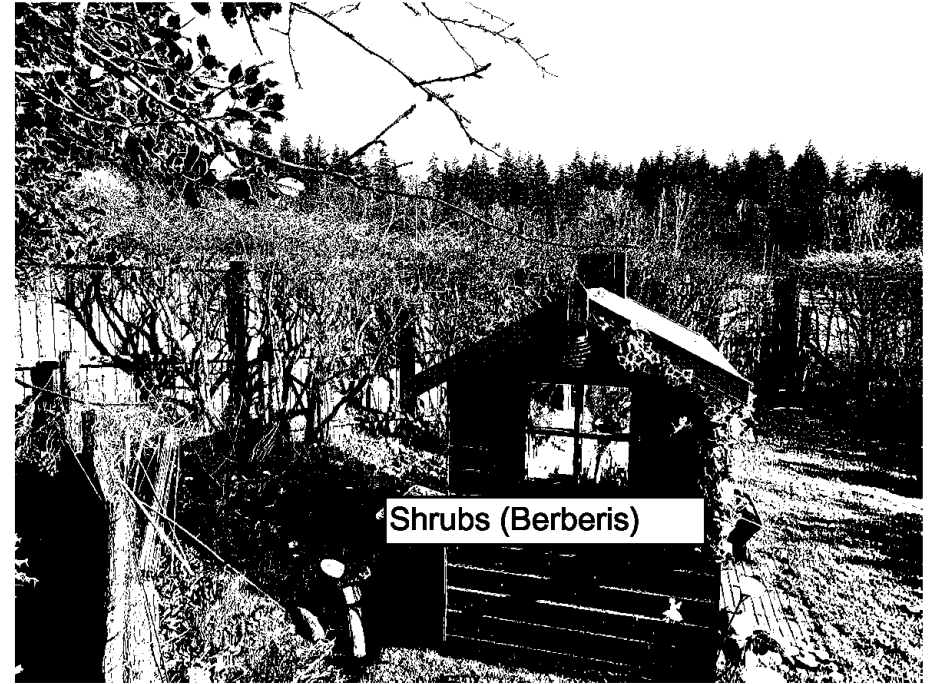
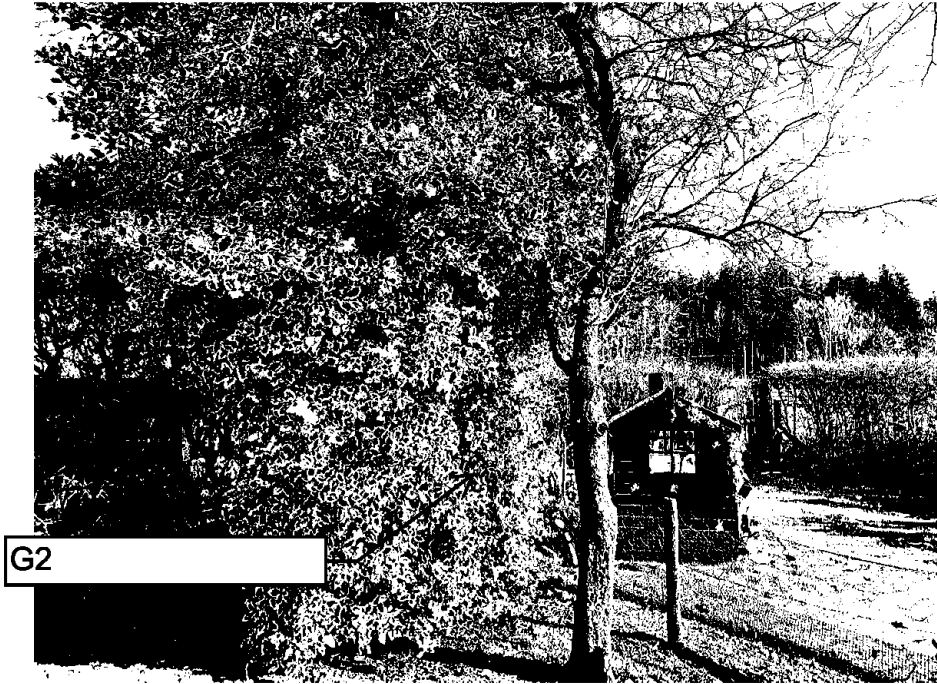


Image date: 25/02/2022

Appendix 3: Site images

Old Garage Dunsop Bridge

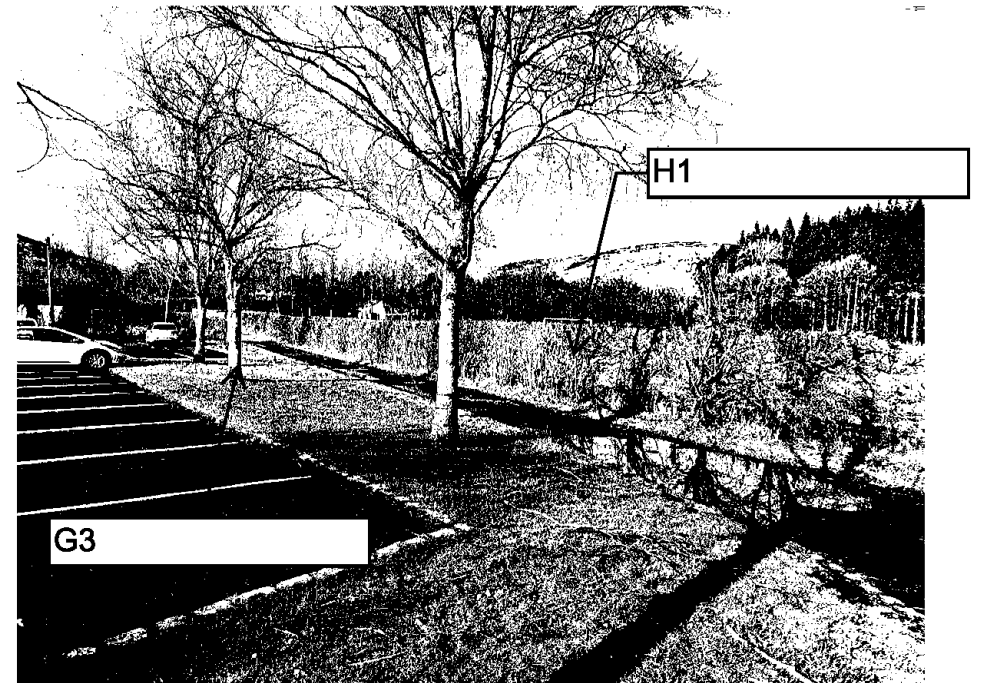


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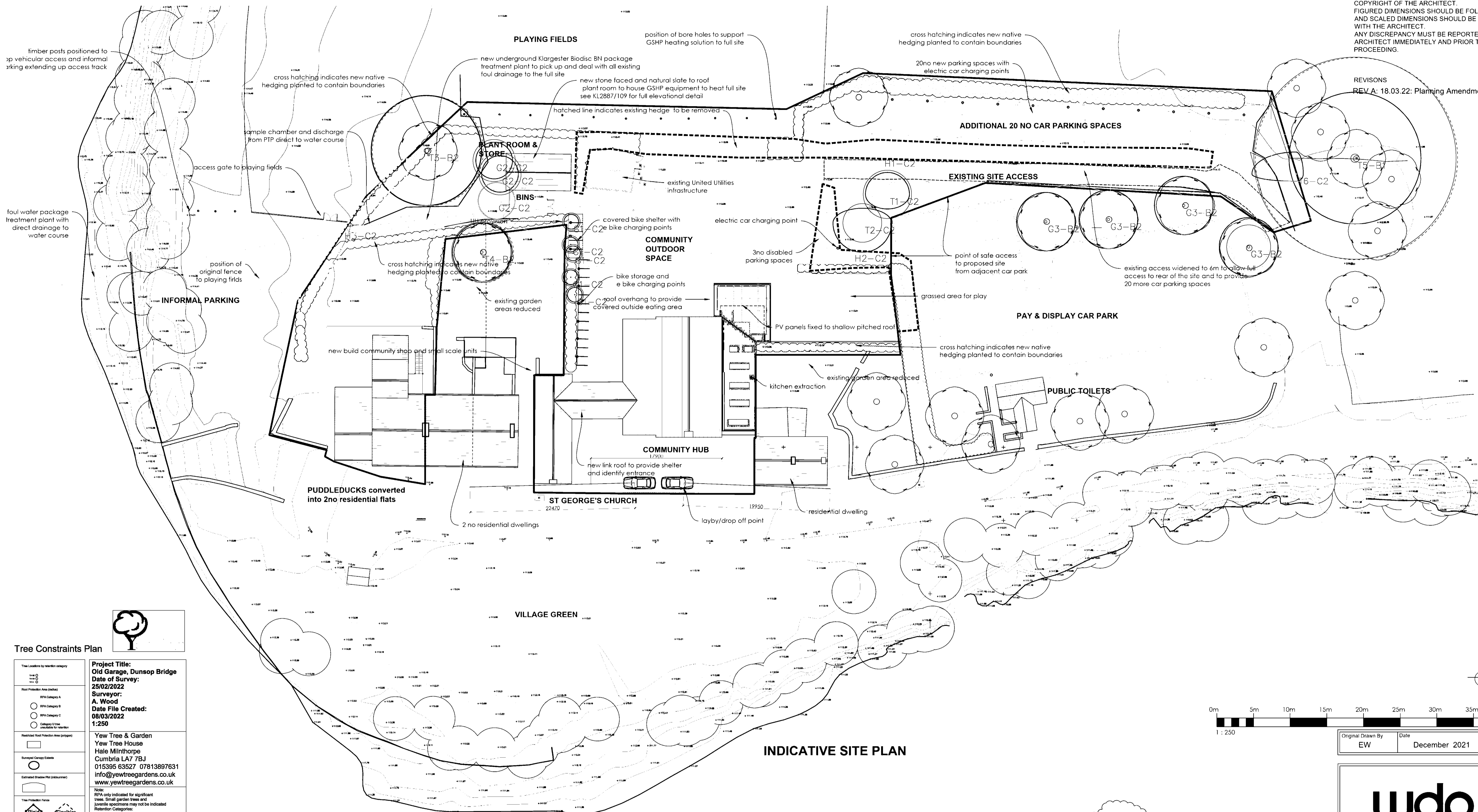
APPENDIX 4

Selected Reference List

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Diagnosis of ill-health in trees by R.G. Strouts and T.G. Winter. (2000) London:HMSO
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BS3998:2010 British Standards Institute
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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

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REVISIONS
REV A: 18.03.22: Planning Amendments.



Tree Constraints Plan

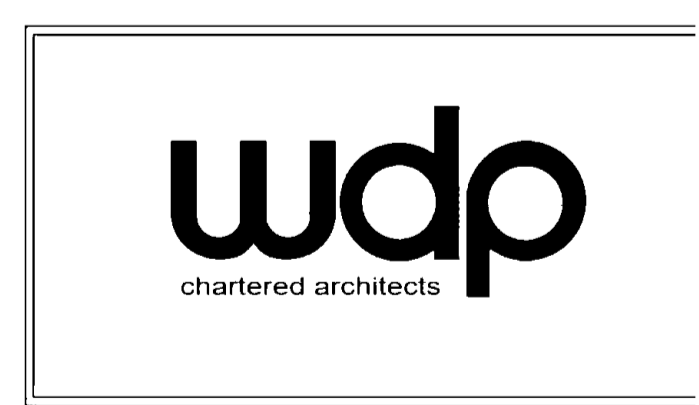
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Date of Survey: 25/02/2022
Surveyor: A. Wood
Date File Created: 08/03/2022
Scale: 1:250

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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.

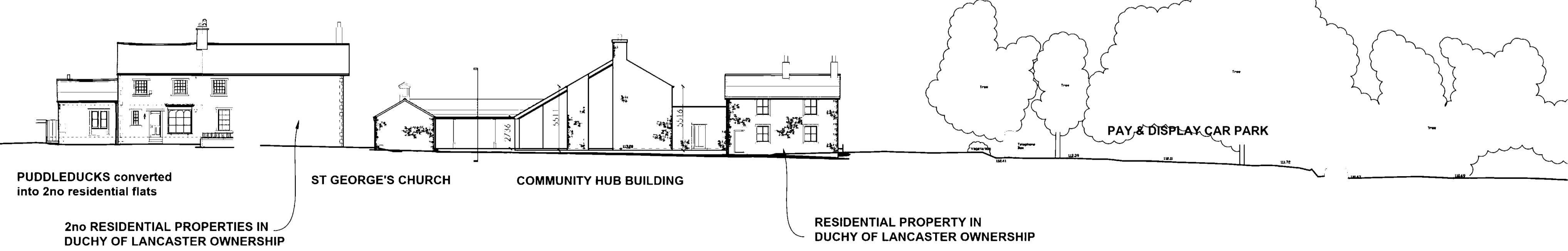
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Original Drawn By: EW Date: December 2021



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Client	The Duchy of Lancaster
Contract	OLD GARAGE SITE Dunsop Bridge
Drawing title	PROPOSED SITE PLAN & BLOCK PLAN
Scale	1:250
Job No.	KL2887
Dwg No.	105
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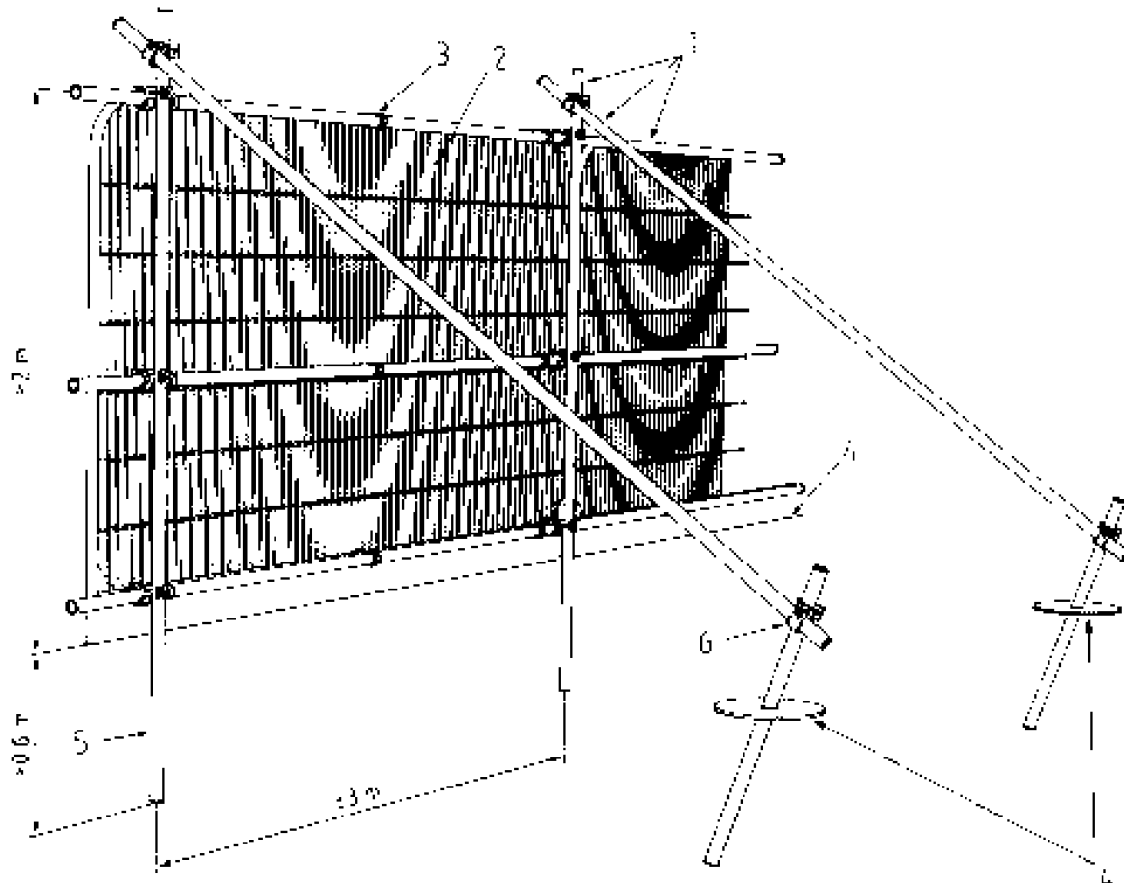


SOUTH ELEVATION (A - A)

Appendix 6 - Protective Fencing

Tree protective fencing

Figure 2 Default specification for protective barrier



Key

- 1 Standard scaffold poles
 - 2 Heavy gauge 2 m tall galvanized 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
-

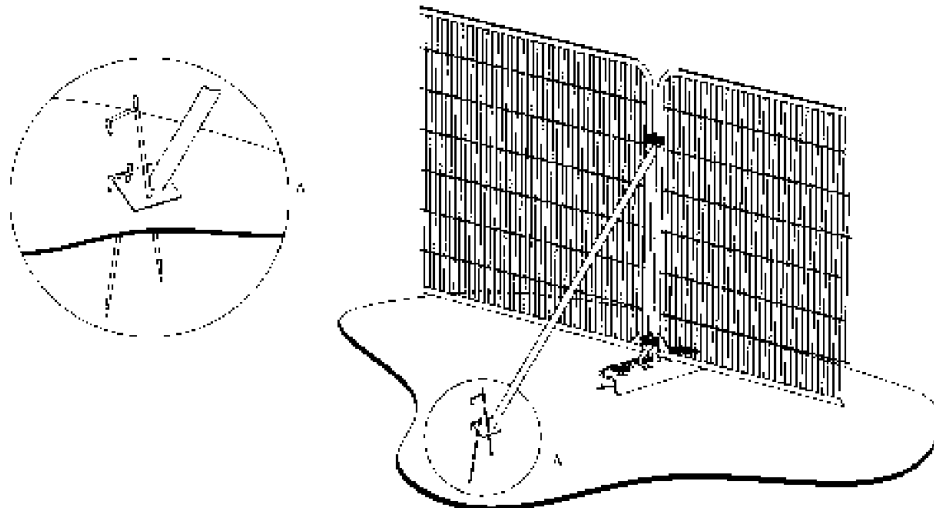
Appendix 6 - Protective Fencing

Tree protective fencing

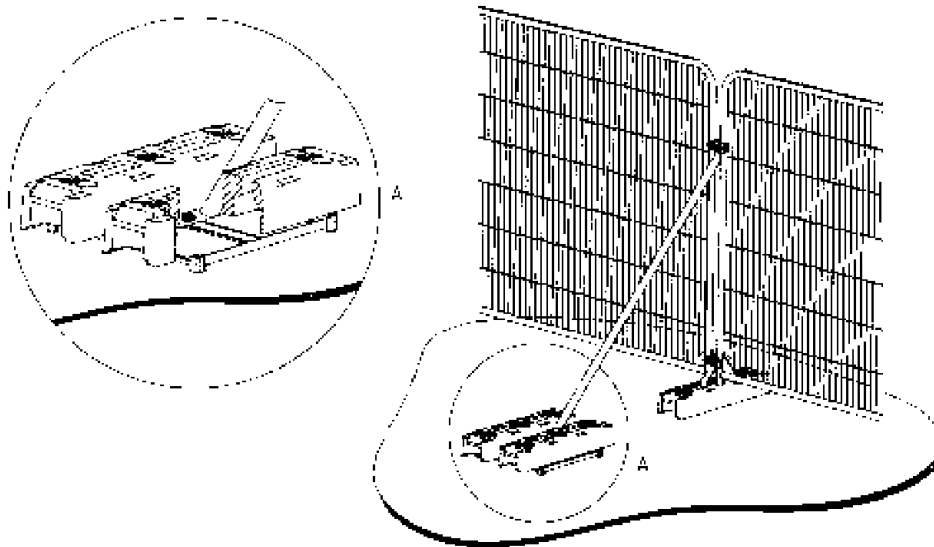
BRITISH STANDARD

BS 5837:2012

Figure 3 Examples of above-ground stabilizing systems



a) Stabilizer strut with base plate secured with ground pins



b) Stabilizer strut mounted on block tray



**TREE PROTECTION
AREA**

KEEP OUT!

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