Land off Accrington Road, Whalley

BS5837:2012

Tree Survey Report

October 2020

Updated December 2022

PDP Associates Ltd
Great Asby
Appleby in Westmorland
CA16 6HD

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Appendices

1.0 Introduction

1.1 Preamble

This survey of the site has been carried out in line with *British Standard BS5837: 2012 Trees in Relation to Design, Demolition and Construction – Recommendations* and aims to provide a baseline report to identify the arboricultural features associated with the development of the site.

1.2 Site Location and Setting

The site is currently a disused pasture field with boundary hedge and trees, lying between Accrington Road on the northern boundary and the River Calder on the southern boundary.

1.3 Brief Description of the Project objectives.

The proposals are for residential development with associated infrastructure.

2.0 Tree Survey Methodology

2.1 Methodology

The survey was undertaken in October 2020. This report updates the information in accordance with *British Standard 5837: 2012 Trees in Relation to Design, Demolition and Construction – Recommendations*. The survey is concerned, primarily, with the assessment and survey of the trees growing within, or on the boundary of the site only, and aims to assist with the integration, where feasible, of the existing trees with the proposed development.

This survey provides quantitative data on tree species, height, stem diameter, height of first significant branch, crown spread, age class, amenity value and a brief qualitative assessment on tree condition and future potential as well as categorization into a BS5837 retention category, including an inspection with respect to decay, defects and hazards.

The species identification is based on visual observations and the common English name of what the tree appeared to be is listed first.

- Tree Heights have been estimated in metres.
- Number of stems includes any below 1.5m.
- Stem diameter of groups has been set as an average while stem diameter of individual trees has been recorded in millimeters at 1.5m above ground level.
- The height of lowest significant branch is measured from ground level in meters.
- Crown Radius is recorded as an approximate diameter rather than cardinal points, due to the difficulty in obtaining access to all trees or distinguishing individual trees' canopies.
- The age class of the trees has been recorded as prescribed in BS 5837:2012 (e.g. young, semi mature, early mature, mature, over mature) and was estimated from visual indicators and should only be taken as a provisional guide.
- The structural condition of the trees was based around an assessment taking into account variations on typical form, the presence of any obvious decay and physical defects. The trees structural condition has been categorised as good, fair, poor or dead. In the case of groups and/or woodlands the condition stated will be typical of the overall group; however there will be exceptions to this in all instances with dead and dying trees among all groups.

The assessment of the amenity value, although subjective, aims to give an impression of the impact that the tree has in the general locale and is based around, size, form, prominence on site etc. Amenity value has been classified as high, medium and low.

Comments are made regarding the physiological state of the tree and include notes on health, vitality and any previous management. Preliminary recommendations regarding any remedial tree works that are considered necessary have also been made.

The estimated remaining contribution of the trees in years was calculated taking into account the trees age and physiological condition at the time of inspection; i.e. less than 10 years, 10-20 years, 20-40 years, more than (+) 40 years.

The retention category is allocated according to the cascade chart within BS 5837:2012 and included within Appendix D.

The Root Protection Area (RPA) has been calculated in accordance with BS5837: 2012. However, as some retained trees are outside the site boundary, the accompanying drawings limit themselves to showing a logical location of tree protection fencing.

2.2 Survey Limitations

No limitations were encountered.

3.0 Survey Results

3.1 Tree Categorisation

A total of 15 elements of vegetation were included in this survey, comprising 10 single trees (T) and 2 hedges (H) and 3 groups (G). Full details of the survey data can be found in the Tree Survey Schedule in Appendix A.

Category A Individual trees and groups of trees. (Trees of high quality)

Trees of high quality and value, including visual amenity value; It is usual for such trees to be retained unless the planning merits of a particular scheme or layout dictate otherwise.

No category A trees were identified as part of this survey.

Category B Individual trees and groups of trees. (Trees of moderate quality)

Trees of moderate quality and value, including visual amenity value; such trees should be considered for retention.

1 category B group, 4 trees and 1 hedge were identified as part of this survey.

Category C Individual trees and groups of trees. (Trees of low quality)

This includes trees of low quality and value including lower visual amenity.

1 category C hedge, 6 trees and 2 groups were identified as part of this survey.

Category U Individual trees and groups of trees. (Trees of poor quality)

Including trees 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. Other factors can affect the decision whether to retain such trees, such as aesthetics, location within development and/or ecological factors.

No category U (poor quality or dead) trees, groups or hedges were identified as part of this survey.

From an arboricultural point of view the category C trees should not influence the potential development of the site however, wherever possible Category B trees should be retained and fully protected in accordance with the details contained in Appendix E. Category A trees' retention is considered to be essential.

Trees in categories A to C are further sub-divided into one or more of three sub-categories (1, 2, 3). Sub categories 1, 2 and 3 are intended to reflect mainly arboricultural (1) mainly landscape (2) or mainly cultural (3) values, respectively.

4.0 Arboricultural Implication Assessment

4.1 Arboricultural Management Recommendations
Trees or hedges requiring specific arboricultural operations

- Category A – no trees, groups or hedges
- Category B - no trees, groups or hedges
- Category C – no trees, groups or hedges

Trees or hedges requiring felling or removal

- Category A – no trees, groups or hedges
- Category B – no trees, groups or hedges
- Category C – no trees, groups or hedges
- Category U – no trees, groups or hedges

4.2 Recommendations to facilitate development -
Trees or hedges requiring specific arboricultural operations

- Category A – no trees, groups or hedges
- Category B – no trees, groups or hedges
- Category C – no trees, groups or hedges

Trees or hedges requiring felling or removal

- Category A – no trees, groups or hedges
- Category B – no trees, groups or hedges
- Category C – Group 2, Group 3 and part of H2 will require removal to allow the current proposals to be undertaken. Similarly, part of H1 will require trimming-back/removing, and the removal of T2, will be required to allow for construction of the drainage scheme.

4.3 Where any scaffolding and working room is required within the root protection zones of any trees then adequate protection against soil compaction, which can lead to damage, should be provided; ie. Laying of scaffolding boards of sheet steel across the existing ground level, prior to erection of the scaffolding. No excavation to be undertaken within the root protection zones.

5.0 Recommendations for Trees to be retained within the Development

- All tree works should be carried out prior to equipment or materials being brought onto site. The tree works can take place prior to protective fencing being installed although care should be taken not to take heavy equipment into the RPA of retained trees.
- The Root Protection Area (RPA) radius is the minimum distance the protective barrier should be from the centre of the individual tree.
- Retained trees may in some cases require crown lifting to a suitable height. This is to prevent damage to secondary limbs during the installation of the protective fencing. It is not considered likely that this will be required, as all protective fencing is beyond the canopy of the retained trees, but if it is, guidance must be sort from an arboriculturist first.
- All trees on site which are to be retained should be protected by barriers before materials are brought onto site or before development, demolition or stripping of soil.
- The protective fencing is required to be semi-permanent so that it is not easily moved and protection is provided to the trees throughout the development process. Examples of fencing can be seen in Appendix E.
- **Once erected, barriers and ground protection should be regarded sacrosanct, and therefore should not be removed or altered without prior consultation of an arboriculturist and approval of the local planning authority.**
- For wheeled or tracked construction traffic movements within the RPA the ground protection should be designed by an engineer to accommodate the likely loading.
- All tree works should conform to BS:3998 2010 Recommendations for Tree Works.
- The protective barrier forming the CEZ will be constructed in accordance with BS5837:2012, which can also be seen in Appendix E.

Tree Number	Species	Ht (m)	No of Stems below 1.5m	Stem Dia (mm)	Height of lowest significant branch	Crown spread (N)	Crown spread (E)	Crown spread (S)	Crown spread (W)	Age Class	Structural	Amenity value	Comments & recommendations	Life Expectancy	BS Cat
T1	Beech	13m	1	600mm	2m	5	5	5	5	Mature	G	H	Mature tree growing within hedgerow, in good condition.	40+	B1
H1	Hawthorn Elm Sycamore	Up to 9m	/	/	GL	/	/	/	/	Mature	F	H	Large, mature hedge, with some elements attaining tree-sized proportions. On side of boundary drainage ditch.	40+	B1
T2	Elm	13m	2	450mm	3m	5	6	6	5	Early mature	F	H	Large tree in fair condition within wider hedgerow.	20-40	B1
T3	Willow	14m	Multi	1500mm	2m	9	8	7	8	Mature	P	M	Large Willow on banks of river. Multi-stem and signs of splitting between leaders but currently fair.	20-40	C1
T4	Alder	12m	1	420mm	2m	6	6	5	5	Early-mature	G	M	Early-mature tree on riverbank in good condition.	40+	B1
T5	Alder	12m	1	420mm	2m	7	7	6	5	Early-mature	G	M	Early-mature tree on riverbank in good condition.	40+	B1
G1	Alder Blackthorn Elder	Up to 7m	/	/	/	/	/	/	/	Early-mature	F	M	Group of self-sown trees, predominantly Alder, on riverbank.	40+	B1

Tree Number	Species	Ht (m)	No of Stems below 1.5m	Stem Dia (mm)	Height of lowest significant branch	Crown spread (N)	Crown spread (E)	Crown spread (S)	Crown spread (W)	Age Class	Structural	Amenity value	Comments & recommendations	Life Expectancy	BS Cat
T1	Beech	13m	1	600mm	2m	5	5	5	5	Mature	G	H	Mature tree growing within hedgerow, in good condition.	40+	B1
H1	Hawthorn Elm Sycamore	Up to 9m	/	/	GL	/	/	/	/	Mature	F	H	Large, mature hedge, with some elements attaining tree-sized proportions. On side of boundary drainage ditch.	40+	B1
T6	Willow	12m	Multi	1200mm	1m	6	6	6	6	Mature	F	M	Off-site mature Willow.	20-40	C1
T7	Sycamore	7m	1	210mm	1m	3	3	3	3	Early-mature	F	L	Off-site tree in adjacent garden.	20-40	C1
T8	Cherry	6m	1	370mm	1m	3	3	3	3	Early-mature	F	L	Off-site tree in adjacent garden.	20-40	C1
T9	Silver Birch	9m	1	210mm	1m	3	3	3	3	Early-mature	F	L	Off-site tree in adjacent garden.	20-40	C1
T10	Whitebeam	8m	1	210mm	1m	3	3	3	3	Early-mature	F	L	Off-site tree in adjacent garden.	20-40	C1
G2	Elm Hawthorn Beech	Up to 15m	/	/	GL	/	/	/	/	Early-mature	F	M	Mixed group of hedge-species and trees on edge of Accrington Road.	20-40	C1

Tree Number	Species	Ht (m)	No of Stems below 1.5m	Stem Dia (mm)	Height of lowest significant branch	Crown spread (N)	Crown spread (E)	Crown spread (S)	Crown spread (W)	Age Class	Structural [illegible]	Amenity value	Comments & recommendations	Life Expectancy	BS Cat
T1	Beech	13m	1	600mm	2m	5	5	5	5	Mature	G	H	Mature tree growing within hedgerow, in good condition.	40+	B1
H1	Hawthorn Elm Sycamore	Up to 9m	/	/	GL	/	/	/	/	Mature	F	H	Large, mature hedge, with some elements attaining tree-sized proportions. On side of boundary drainage ditch.	40+	B1
G3	Elm Hawthorn Ash	Up to 12m	/	/	GL	/	/	/	/	Early-mature	F	M	Mixed group of hedge-species and trees on edge of Accrington Road.	20-40	C1
H2	Hawthorn Elm	Up to 2m	/	/	GL	/	/	/	/	Young	F	M	Trimmed, species-poor hedge with occasional Elm on edge of Accrington Road.	20-40	C1

Appendix B – Tree Constraints Plan – please refer to Dwg c-812-20

Appendix C – Root Protection Area (RPA) measurements - please refer to Dwg c-812-20

Appendix D - Method Statement for Work Close to or Within Root Protection Zones

1.0 Description

Within the root protection zones, minimal, if any, excavation will be required, but if any were, it must be carried out **by hand only**, as detailed in section 2.0 below.

2.0 On site storage of Spoil and Building Materials

Prior to and during all construction works on site, no spoil or construction material will be stored within the root protection zone of any tree requiring protection, even if the proposed development is to be within the crown spread. This is in order to avoid compaction of the roots of the trees.

3.0 Tree Protection

Adequate tree protection of the trees' trunks and part of the root protection zones already exists in the form of a close-boarded timber fence on the boundary of the property. This barrier should remain in place or be replaced by Herras Fencing in accordance with **BS5837:2012** (it is impracticable to protect all the root protection zone due to the nature of the development; any work in an unprotected area must be carried out as directed in sections 4 to 6).

If replaced with Herras fencing, once erected, the protective fencing shall be considered sacrosanct. If any alterations are required after its erection, the prior written consent must be sought from the local authority's tree officer.

If any interference with the trees' canopies is going to occur through plant movement or fencing erection, then permission to crown-reduce the trees shall be sought from the local authority's tree officer and, if approved, carried out by a qualified arboricultural consultant, and by the minimum amount required to ensure no damage. It is suggested a meeting between the arborist and the tree officer be arranged to precisely agree the extent of any crown reduction but as a minimum it should be sufficient to prevent overhang above the proposed roof and skylights.

4.0 Ground Protection

Where traffic may encroach within a root protection zone of a retained tree, protective surfacing shall be laid down if the area is to be trafficked or have scaffold pole placed on it, to allow access without causing compaction of the soil or damage to the roots. This must be through non-dig methods; ie. laying of scaffolding boards of sheet steel across the existing ground level, with a 100mm layer of washed hardcore as a sub-base, offering additional protection, if deemed necessary to prevent soil compaction.

5.0 Digging within root protection zones.

No excavation is expected to be required within the root protection zones of retained trees, but if any is required either in or within 1m of a root protection zone, such excavation shall be carefully hand-dug to display any tree roots which are within the line of that trench. If at all possible, no roots encountered should be severed; this particularly applies to roots with a diameter of 25mm or over. Any roots which are encountered (and again particularly those over 25mm in diameter) should either be dug around and left to span the trench, or carefully dug out and left to relay during the refilling of the trench. In both cases, the roots shall be wrapped with Hessian prior to refilling.

Should the severance of any roots be unavoidable, the cut shall be made cleanly. If any roots greater than 25mm are severed, it is advisable to seek the advice of a qualified arboricultural expert in order to verify the tree's future safety

All backfilling shall also be carried out by hand, using an inert granular material mixed with the excavated soil only, and placed around the retained roots and compacted carefully in layers of 300mm at a time.

6.0 General Comments

All work should be carried out with regard to BS5837:2012, at all times.

Should any tree-related problems arise during the construction of the proposed development, the developer will ensure that it contacts the Local Planning Authority Arboricultural Officer at once. The developer will, in liaison with the Local Planning Authority, employ a suitable qualified Arboriculture contractor / consultant to deal with the matter as soon as possible.

If the methods described within this method statement are followed, then there should be no adverse impact on the retained trees.

IF IN DOUBT, PLEASE CONTACT PIERS PALMER (LANDSCAPE ARCHITECT) AT PDP ASSOCIATES, ON 017683 54130.

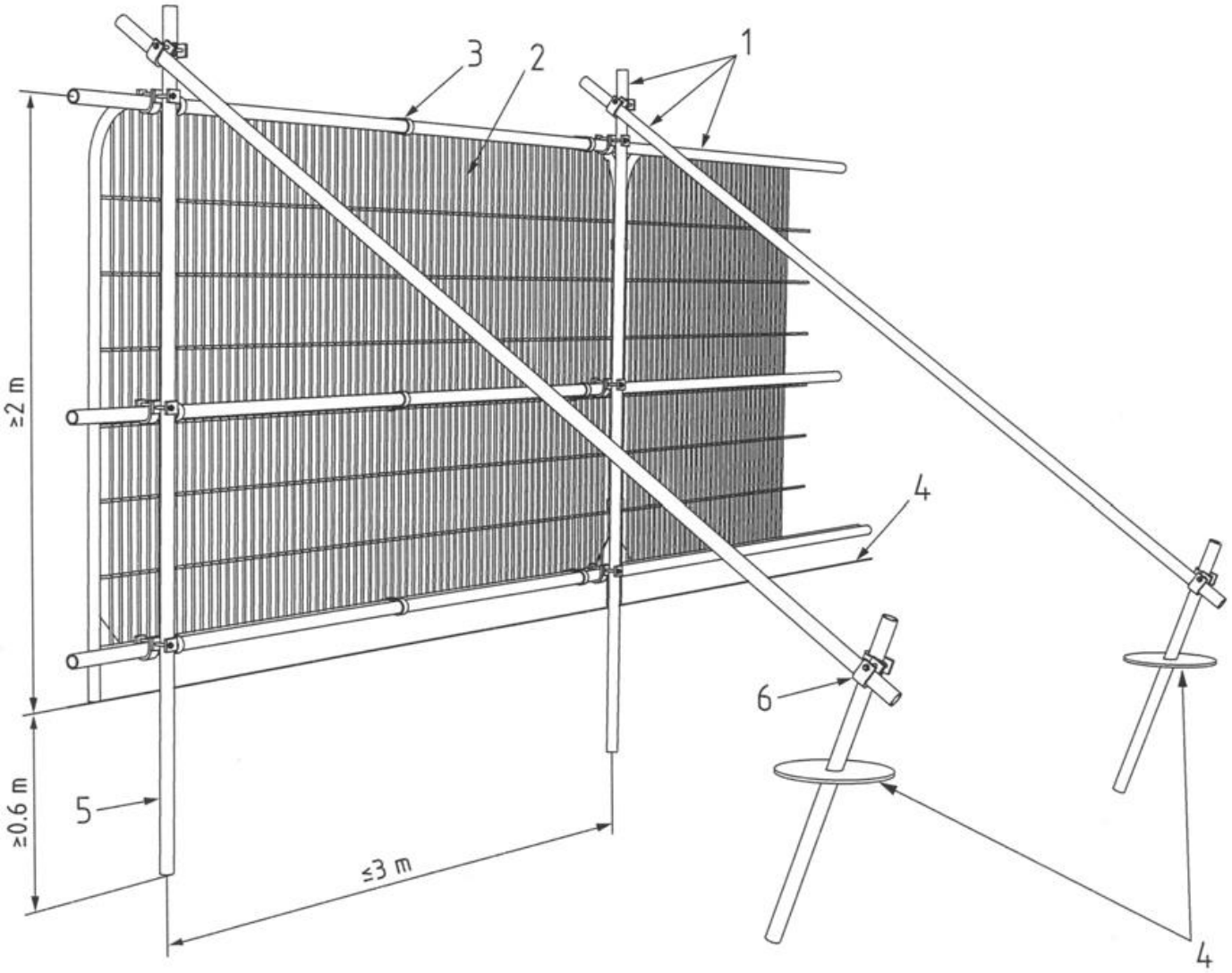
Appendix E - Method Statement for Work Close to or Within Root Protection Zones

Trees unsuitable for retention		
Category	**Definition**	**Identification on plan**
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	• Trees that have a serious, irremediable, structural defects, such that their early loss is expected due to collapse, including those that will become unviable after removal of other U category trees (i.e. 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 NOTE Category U trees can have existing or potential conservation value which it might be desirable to preserve;	DARK RED

Trees to be considered for retention				
Category	**Definition**			**Identification on plan**
	1. Mainly arboricultural values	2. Mainly landscape values	3. Mainly cultural values, including conservation	
Category A Trees of high quality with an estimated remaining life expectancy of at least 40 years contribution (a minimum of 40	Trees that are particularly good examples of their species, especially if rare or unusual, or essential components of groups, or of 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	Trees, groups or woodlands of significant conservation, historical, commemorative or other value (e.g. veteran trees or wood-pasture)	LIGHT GREEN
Category B Those of moderate quality With an estimated remaining life expectancy of at least 20 years	Trees that might be included in the high category, but are downgraded because of impaired condition (e.g. presence of remediable defects including unsympathetic past management and storm damage) such as 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 as groups or woodlands, such that they form distinct landscape features, thereby attracting 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	MID BLUE
Category C Those of low quality with an estimated remaining life expectancy of at least 10 years, or young trees with a stem diameter below 150mm	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 landscape value, and/or trees offering low or only temporary/transient landscape benefits	Trees with no material conservation or other cultural value	GREY

Appendix F – Protective Fencing detail

Figure 1: Default Specification for Protective Barrier.



KEY:

1 Standard scaffold pole

2 Heavy gauge 2m tall galvanised tube and welded mesh infill panels

3 Panels secured to uprights and cross-members with wire ties

4 Ground level

5 Uprights driven into the ground until secure (minimum depth 0.6m)

6 Standard scaffold clamps

Alternative tree protection barrier design

2 meter tall welded mesh panels standing in rubber or concrete feet joined using a minimum of two anti-tamper couplers installed so they can only be removed from inside the protected area. The fence couplers should be at spaced least 1 m apart, but uniformly across the whole barrier. These panels must be supported within the protected area with struts attached to a base plate secured by ground pins as per figure 2a.

Where the fencing is installed above retained hard surfacing and / or it is otherwise not feasible unfeasible to use ground pins (e.g. due to underlying services or structural roots), the struts can be mounted on a block tray as per figure 2b.

Figure 2a: Stabilizer Strut with Base Plate Secured with Ground Pins

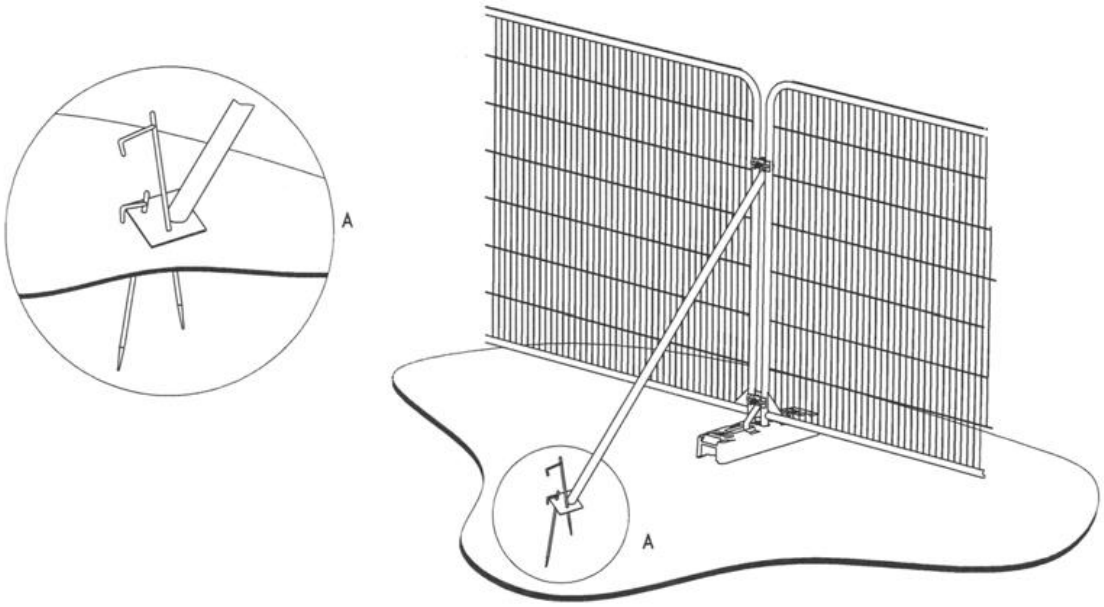
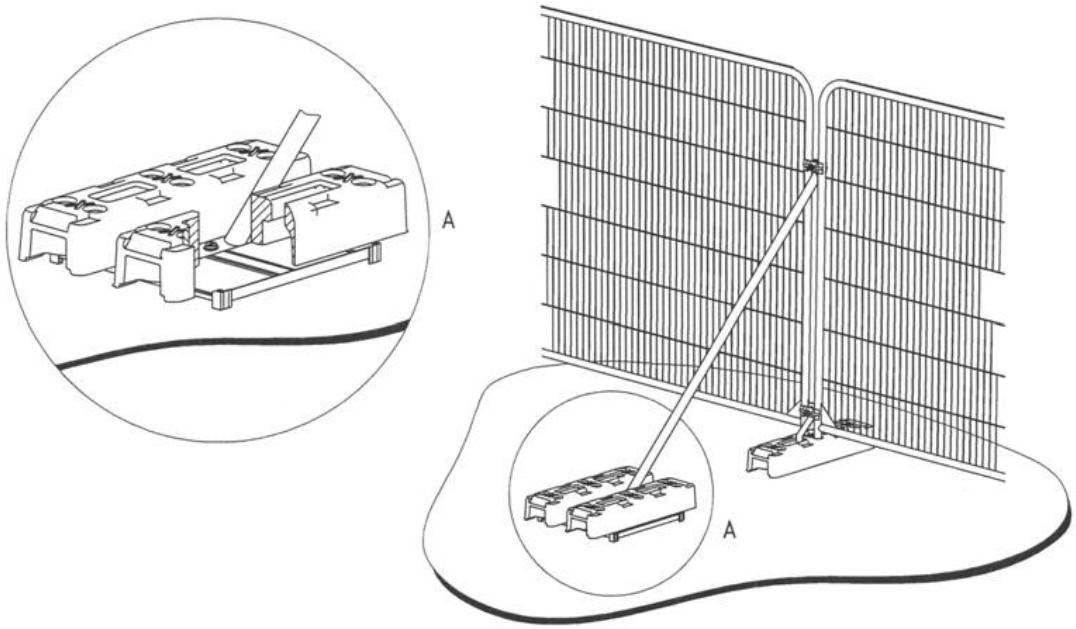


Figure 2b: Stabilizer Strut Mounted on Block Tray



Appendix G - Tree Protection Site Notice

Appendix H – Legal Restrictions

- Trees in any location may be protected by legislation. Where development is proposed, additional legal protection may be appropriate and can be enforced by the local authority. Attention is drawn to legal controls and liabilities under common law for consideration at the earliest stages of potential site development.
- The Town and Country Planning Act 1990 requires that, except in certain circumstances, “no work shall be carried out which will affect trees over a certain size which are situated in Conservation Areas”. Six weeks’ notice of intent has to be given to the local authority before the work is carried out. This provides an opportunity for the local authority to make a Tree Preservation Order (TPO) under this Act to protect the trees.
- Tree Preservation Orders allow for trees to be protected either as individuals, groups, areas or woodlands. The orders have the effect of preventing the cutting down, topping, lopping, uprooting, wilful damage or wilful destruction of trees, except in certain circumstances, other than with consent of the local authority.
- Even when no specific legal protection exists, it may be necessary to obtain a felling licence. These apply if the volume of timber exceeds specified amounts; site clearance, even of small areas, before detailed planning permission has been granted could exceed the felling licence quota. The Forestry Commission, under the Forestry Act 1967, administers felling licences.
- Before carrying out any arboricultural or forestry operations, consideration should be given to the following legislation for protected species of flora and fauna: The Wildlife and Countryside Act 1981 (as amended), the Conservation (Natural Habitats & c.) Regulations 1994 (as amended), and the Countryside Rights of Way Act 2000 protected species of flora and fauna. This will prevent any harm or damage to protected species.
- Substantial penalties and or prison sentences can be incurred for contravention of legislation relating to protected species.
- PDP Associates has not been requested to make any checks for protected species on this site