

ARBORICULTURAL IMPACT ASSESSMENT	
Site:	Spread Eagle Farm, Clitheroe Road, Barrow, Lancashire, BB7 8AQ
Survey Date:	16 January 2013
Report Date:	31 January 2013
Prepared By:	Phill Harris – Chartered Arboriculturist
Report Ref:	BTC433
Agents for Client:	Gary Hoerty Associates

Introduction and Rationale. Bowland Tree Consultancy Ltd was instructed to carry out an appraisal of the potential for construction works at the above site to impact upon trees and, in turn, to advise on appropriate protective measures during development and on facilitation pruning and/or felling works where identified as necessary. Further to this instruction I confirm that I visited the site on 16 January 2013 and carried out a survey of trees in accordance with BS5837:2012 - Trees in Relation to Design, Demolition and Construction – Recommendations, and our disclaimer at page 5.

In this respect I set out a brief overview of my observations, findings and recommendations below, along with comments on any issues raised. I also enclose a Tree Survey Schedule (TSS) detailing specific tree related information and a Tree Impact Plan (TIP). The TOP shows the existing site under consideration with pertinent tree constraints detailed and an overlay of the proposed development with associated tree impacts indicated. The TIP is based upon scaled electronic topographical plan supplied by the architect and, for the purpose of this report, I presume the details of the plans to be accurate.

The Site and the Proposal. The site under consideration is located in a rural area to the south of the village of Barrow, within the administrative boundaries of Ribbles Valley Borough Council. The site is bordered to the east by an access drive (see Fig. 1, below), to the south by a woodland belt, to the west by open fields and to the north by a private garden area. The site currently consists of areas of rough ground with dense ground vegetation, compacted earth, an outbuilding, a storage container and various trees and shrubs (see Figs. 1 & 2, below). Site topography varies slightly with several minor undulations.



Fig. 1: The site, as seen from the east looking north-west, with group G2 to the right and tree T9 to centre



Fig. 2: The north-western section of the site, with Oak tree T1 to the centre

I am informed by the project agents, Gary Hoerty Associates, that the proposal is to construct a detached two-storey property with an attached garage, associated hard-standing and outdoor amenity space, as detailed on the attached TIP.

The Trees. 20 individual trees (prefixed 'T'), three group of trees (prefixed 'G') and a woodland (prefixed 'W') were surveyed in respect of the proposal and its associated potential to impact upon said vegetation, and the respective constraints of these items are plotted on the TIP attached. I have not been informed if the site is within a Conservation Area (CA) or if any of the trees at the site are the subject of a Tree Preservation Order (TPO), and it is therefore important to contact the planning office at Ribbles Valley Borough Council to check

for the presence of any such statutory protection prior to scheduling or carrying out any tree works.

The trees are of various deciduous and evergreen broadleaf and evergreen coniferous species, including Common Oak, Redwood, Goat Willow and Silver Birch. They are in the young to post-mature age range and stand at heights of up to 18 metres, have maximum diametrical crown spreads of up to approximately 12.5 metres and stem diameters of up to approximately 650 millimetres. Tree dimensions and other pertinent information such as structural defects and physiological deficiencies, along with recommendations for remedial management works, are included in the TSS attached. Of the surveyed vegetation individual trees T1, T5 to T8 and group G1 are located within neighbouring land and are therefore under private third party ownership.

The trees, groups and hedges were appraised in accordance with BS5837:2012 Table 1 (attached) and, as detailed in Table A (below), one of the trees and the woodland were allocated a high retention value of 'A', four of the trees were allocated a moderate retention value of 'B', and seven of the trees and the three groups were allocated a low retention value of 'C'. In addition, seven of the trees are considered unsuitable for retention due to either physiological or structural deficiencies. With regard to Table A it should be noted that tree quality and value is categorised within the existing context without taking into account any site development related issues, but that the recommendations for works take the proposal into consideration where there are clearly definable potential impacts upon trees.

Table A: BS5837-2012 Retention Categories of the Surveyed Trees

	Ret. Cats.	Tree Numbers	Totals
Trees of a high quality that should be afforded appropriate consideration in the context of development	'A'	T1, W1	1 Tree 1 Woodland
Trees of a moderate quality that should be afforded appropriate consideration in the context of development	'B'	T11, T15, T19, T20	4 Trees
Trees of a low quality that should be afforded appropriate consideration in the context of development	'C'	T2, T3, T8, T9, T10, T12, T17, T18, G1, G2, G3	8 Trees 3 Groups
Trees unsuitable for retention	'U'	T4, T5, T6, T7, T13, T14, T16	7 Trees
			= 20 Trees, 3 Groups & 1 Woodland in Total

The Proposal's Projected Impacts on Trees. As detailed in Table B (below) and on the TIP, implementation of the proposed development will require the removal of seven individual 'C' category (i.e. low quality) trees and two 'C' category groups. Nonetheless, the loss of these trees is projected to have a negligible impact upon the visual amenity of the locality. In addition U category Alder tree T5, which is located on neighbouring land to the north, will require pruning works to reduce its crown back in order to facilitate the construction works.

Additionally, three of the trees within the site boundaries (see Table B, below) and a further four located outside the site boundaries are projected to have safe remaining lifespans of less than ten years due to various structural defects and/or physiological deficiencies and are therefore considered unsuitable for retention regardless of the proposals.

Table B: Arboricultural Impacts of Proposed Development & Other Tree Removal Proposals

	Ret. Cats.	Removals necessary to implement development	Removals suggested for non-development related reasons	Total number of tree removals
Trees of a high quality that should be afforded appropriate consideration in the context of development	'A'	-	-	-
Trees of a moderate quality that should be afforded appropriate consideration in the context of development	'B'	-	-	-
Trees of a low quality that should be afforded appropriate consideration in the context of development	'C'	T2, T3, T9, T10, T12, T17, T18, G2, G3	-	7 Trees 2 Groups
Trees that should be removed for sound management reasons regardless of site plans	'U'	-	T4, T13, T16	3 Trees
Totals		7 Trees 2 Groups	3 Trees	= 10 Trees & 2 Groups in Total

Tree Retention Recommendations. Adequate protection of retained tree RPAs during construction is essential if their long-term viability is to be assured. RPAs, which are calculated through a method provided in BS5837:2012, are ground areas around trees that are to be kept free from major disturbance throughout

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development through the installation of temporary protective fencing to form a Construction Exclusion Zone. The TSS lists the RPAs of the individually surveyed trees as areas in square metres and as radial distances in metres from stem centres, whilst the RPAs are indicated in magenta on the TIP. A Temporary Protective Fencing Specification is attached which gives details of the type, purpose and construction of the temporary protective fencing that should be used.

In respect of retained tree protection BS5837:2012 recommends that, where considered expedient, an Arboricultural Method Statement and Tree Protection Plan be prepared detailing special mitigation construction. Essentially, the Arboricultural Method Statement and Tree Protection Plan describe the procedures, working methods and protective measures to be used in relation to retained trees in order to ensure that they are adequately protected during the construction process. The production of and adherence to an Arboricultural Method Statement and Tree Protection Plan should be conditioned as part of a planning approval if considered necessary.

In addition to the points raised herein I would also emphasise the importance of ensuring that all relevant recommendations included under the General Recommendations section at page 4 be followed accordingly.

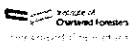
Summary and Conclusions. The construction of a single detached residential property is proposed at the site under consideration. As such, 20 individual trees, three groups of trees and one woodland were surveyed in respect of the proposal and its associated potential to impact upon said vegetation.

One of the trees and the woodland have a high retention value, four of the trees have moderate retention values, eight of the trees and the three groups have low retention values, and seven trees are considered unsuitable for retention.

My appraisal determines that implementation of the proposed development will require the removal of seven low quality trees and two low quality groups, but that the removal of the trees in question will have a negligible impact upon the visual amenity of the locality. My appraisal also determines that three of the trees within the site boundaries and four located outside the site are considered unsuitable for retention regardless of the proposals.

I also conclude that the existing trees that are to be retained should be protected, as far as is practicable, throughout the development in accordance with BS5837:2012, and that it would be prudent for the LPA to condition the production of an Arboricultural Method Statement and a Tree Protection Plan as part of a planning approval.

Phill Harris MSc BSc(Hons) HND CEnv MArborA MICFor
Chartered Arboriculturist



Enclosures: Tree Survey Schedule
BS5837:2012 Table 1
Temporary Protective Fencing Specification
Tree Impact Plan

GENERAL RECOMMENDATIONS

Non-Development Related Tree Works and Recommendations. Any general management pruning works for retained trees that are stated to be non-development related, as detailed in the TSS, are recommended in accordance with prudent arboricultural management and should therefore be carried out regardless of any site plans and potential changes in land usage. All tree works should be carried out in accordance with BS3998:2010 - Tree Work – Recommendations.

Tree Work Related Consents. No tree pruning or removal works should commence on site until necessary consents have been obtained from the LPA as part of a planning approval or in respect of any statutory tree protection.

Protected Species. Hedges, climbing plants, shrubs and trees should be inspected for birds' nests prior to any clipping, pruning or removal works, and any work likely to destroy or disturb active nests should be avoided until the young have fledged. All personnel carrying out tree works should also be vigilant of the possibility that roosting bats may be present in trees and, if any bat roosts are identified, then it is essential that works are halted immediately and that a suitably qualified and experienced ecologist investigate prior to works continuing.

Arboricultural Contractors. All tree works should be carried out by suitably qualified and experienced arboricultural contractors carrying appropriate public liability insurance cover and be implemented to the minimum current CE and UK industry standards and in accordance with industry codes of practice. Only certificated personnel should, in accordance with The Control of Pesticides Regulations, apply any pesticides.

Contractors and Subsequently Identified Tree Defects. Contractors should be made aware that, should any significant tree defects become apparent during operations that would not have been immediately obvious to the surveyor, then such defects should be notified immediately to the client and subsequently confirmed to the consultant within five working days.

New Tree Planting. Where trees are removed in order to facilitate construction then new tree planting proposals should be included as part of the landscape design plan for the site. All tree planting should be carried out in accordance with BS4428:1989 - Code of Practice for General Landscape Operations, BS3936-1:1992, Nursery Stock – Part 1: Specification for Trees and Shrubs and BS4043:1989, Transplanting Root-Balled Trees where applicable.

Retained Tree Management. Any tree risk management appraisal and subsequent recommendations made in this report were based on observations and site circumstances at the time of my survey. Trees are dynamic living organisms whose structure is constantly changing and even those evidently in good condition can succumb to damage and/or stress. In this respect I would note that, under the Occupiers' Liability Act (1957 & 1984), site occupants have a duty of care to take reasonable steps to prevent or minimise the risk of personal injury and/or damage to property from any tree located within the curtilage of the land they occupy. It is accepted that these steps should normally include commissioning a qualified and experienced arboriculturist to survey their trees in order to identify any risk of harm to persons or damage to property that they may present and, where unacceptable risks are identified, taking suitable remedial action to negate those risks.

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DISCLAIMER

Survey Limitations: Unless otherwise stated all trees are surveyed from ground level using non-invasive techniques, in sufficient detail to gather data for and inform the design of the current project only. The disclosure of hidden crown and stem defects, in particular where they may be above a reachable height or where trees are ivy clad or in areas of ground vegetation, cannot therefore be expected. All obvious defects, however, are reported. Detailed tree safety appraisals are only carried out under specific written instructions. Comments upon evident tree safety relate to the condition of said tree at the time of the survey only. Unless otherwise stated all trees should be re-inspected annually in order to appraise their on-going mechanical integrity and physiological condition. It should, however, be recognised that tree condition is subject to change, for example due to the effects of disease, decay, high winds, development works, etc. Changes in land use or site conditions (e.g. development that increases access frequency) and the occurrence of severe weather incidents are also significant considerations with regards tree structural integrity and trees should therefore be re-assessed in the context of such changes and/or incidents and inspected at intervals relative to identified and varying site conditions and associated risks.

Where trees are located wholly or partially on neighbouring private third-party land then said land is not accessed and our inspection is therefore restricted to what can reasonably be seen from within the site. Stem diameters of trees located on such land are estimated. Any subsequent comments and judgments made in respect of such trees are based on these restrictions and are our preliminary opinion only. Recommendations for works to neighbouring third-party trees are only made where a potential risk to persons and/or property has been identified during our survey or, if applicable, where permissible works are required to implement a proposed development. Where significant structural defects of third-party trees are identified and associated management works are considered essential to negate any risk of harm and/or damage then we will first attempt to inform the site occupier of the issues and, if not possible, then inform the relevant Council. Where a more detailed assessment is considered necessary then appropriate recommendations are set out in the Tree Survey Schedule.

Where tree stem locations are not included on the plan(s) provided then they are plotted at the time of the survey using, where appropriate and/or practicable, a combination of measurement triangulation and GPS co-ordination. Where this is not possible then locations are estimated. Restrictions in these respects are detailed in the report.

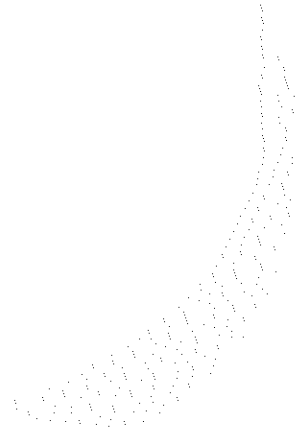
The potential influence of trees upon buildings or other structures resulting from the effects of their roots abstracting water from shrinkable load-bearing soils is not considered herein. The advice of a structural engineer should be sought with regard to appropriate foundation depths for new buildings with reference to NHBC Standards Chapter 4.2 (NHBC, 2008).

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TREE SURVEY SCHEDULE & BS5837:2012 'TABLE 1'



TREE SURVEY SCHEDULE FOR ARBORICULTURAL IMPACT & PROTECTION APPRAISAL

Site: Spread Eagle Farm, Clitheroe Road, Barrow, Lancashire, BB7 8AQ

Agent for Client: Gary Hoerty Associates

Surveyor: Phill Harris – Chartered Arboriculturist

Assessment Date: 16 January 2013

Job Reference: BTC433

Page: 1 of 4

No.	Species	Height	Stem Diam.	Branch Spread	Branch & Canopy Clearances	Life Stage	PC	General Observations and Comments	Management Recommendations	ERC	Cal. Grade	RPA (m²)	RPA Radius (m)
T1	Common Oak	12	650#	N 6 E 6 S 6.5 W 6.5	3-SE 1.5	M	G	- Reportedly located on neighbouring land. - Not inspected in detail. - Moderately large amount of deadwood to approximately 80mm diameter.	Protect Root Protection Area (RPA) throughout development.	40+	A1/2	191	7.8
T2	Ash	10	200	N 0.5 E 1.5 S 3.5 W 1.5	2-S 0.5	Y	G	Highly biased crown and minor stem lean to south due to partial suppression by neighbouring tree(s).	- Remove in order to allow construction as proposed. - Grind out stump.	40+	C1/2	18	2.4
T3	Ash	12	3x180 2x150 (ms)	N 1 E 2.5 S 4.5 W 1.5	N/A 0.5	SM	G	- Multi-stemmed regrowth from evidently previously cut stump. - Highly biased crown to south-east due to partial suppression by neighbouring tree(s).	- Remove in order to allow construction as proposed. - Grind out stump.	10+	C1/2	64	4.53
T4	Elder	5	≤ 70 (ms)	N 0.5 E 4.5 S 1.5 W 1.5	N/A 0	EM	P	- Multi-stemmed from ground level. - Several stems have partially failed. - Crown showing signs of a substantial reduction in vitality.	- Remove due to poor physiological condition. - Grind out stump.	<10	U	13	2.06
T5	Common Alder	13.5	500#	N 5 E 5 S 5 W 4	3-SW 4	PM	MD	- Reportedly located on neighbouring land. - Not inspected in detail. - Crown showing signs of a substantial and evidently progressive reduction in vitality. - In decline with short projected remaining safe life expectancy.	- Inform tree owner of its poor condition. - Protect RPA, as far as is practicable, throughout development. - Prune south side of crown back to site boundary – unless access agreed with tree owner works will need to be carried out from site.	<10	U	113	6
T6	Elder	8	180#	N 0 E 1 S 2 W 0.5	N/A 5	M	P	- Located on neighbouring land and not inspected in detail. - Extensive decay evident to lower stem. - Highly biased crown to south due to suppression by neighbouring tree(s). - Crown showing signs of a substantial and evidently progressive reduction in vitality. - In decline with short projected remaining safe life expectancy.	Inform tree owner of its poor condition.	<10	U	15	2.6

Headings and Abbreviations:

No. Species: Allocated sequential reference number. Tree (T), Group (G), Woodland (W) or Hedge (H) reference number - refer to plan and to numbered tags where applicable.

Height: Common name

Stem Diam.: In metres, to half nearest metre - where possible approximately 80% are measured using an electronic clinometer and the remainder estimated against the measured trees. In the case of Groups and Woodlands the measurement listed is that of the highest tree.

Branch Spread: Crown diameter in millimetres, to nearest 10mm - measured and calculated as per Annex C of BS5837:2012. MS = multi-stemmed, TS = twin-stemmed

Branch & Canopy Clearances: Crown radius measured for estimated where considered appropriate from the four cardinal points (north, east, south and west) to give an accurate visual representation of the crown

Life Stage: Extending height above ground level, in metres, of first significant branch and direction of growth (e.g. 2.5-N) and of canopy at lowest point - to inform on crown to height ratio, potential for shading, etc.

PC: Estimated age class - Y = young, SM = semi-mature, M = mature, PM = post-mature

Physiological Condition - a measure of the tree's overall vitality, i.e. D = Dead, MD = Moribund, P = Poor, M = Moderate, G = Good

Comments relating to the tree's overall condition and any other pertinent factors including structural defects, current and potential direct structural damage, physiological decline, poor form, etc.

General Observations and Comments: Either Preliminary or In Consideration of the Proposal - in the case of Abandonment Constraints Surveys the recommended management works only take existing site and tree circumstances and conditions into account and not proposed developments. Arboricultural Impact Assessment and Method Statement related

Management Recommendations: Surveys take the proposed development into consideration with recommendations made accordingly. More than one option may be given if considered appropriate

ERC: Estimated Remaining Contribution - in years as per BS5837:2012 (i.e. <10, 10+, 20+, 40+)

Cal. Grade: Category Grading - tree retention value listed as U, A, B or C - in accordance with BS5837:2012 Table 1

RPA m²: Root Protection Area in m² - calculated area around the tree that must be appropriately protected throughout the development process in order avoid root damage

RPA Radius (m): Root Protection Area Radius - in metres measured from the centre of the stem to the line of tree protection

(Estimated Dimensions): Where trees are located off-site, or are inaccessible for any other reason, and accurate measurements or other information cannot be taken then the information provided is estimated and is duly suffixed with a '#' symbol

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Page: 2 of 4

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T7	Bird Cherry	11	2x250 (ts)#	N 4 E 1.5 S 3 W 2	3-S 2	EM	G	- Located on neighbouring land and not inspected in detail. - Stem bifurcates into co-dominant sub-stems at a height of approximately 0.7m with a tight fork. - Sub-stem to south has partially failed at a height of approximately 2m at point of an acute included bark union.	Inform tree owner of its poor condition.	<10	U	56	4.24
T8	Bird Cherry	9	4x160 (ms)#	N 4 E 3 S 2 W 0	N/A 0.5	M	G	- Located on neighbouring land and not inspected in detail. - Multi-stemmed from ground level. - Highly biased crown to north-east.	Protect RPA throughout development.	10+	C1/2	39	3.54
T9	Goat Willow	10.5	6x230 (ms)	N 5 E 5.5 S 5 W 5.5	N/A 3	PM	M	- Stem divides into multiple sub-stems at a height of approximately 0.5m with tight forks. - Crown showing signs of a moderate reduction in vitality.	- Remove in order to allow construction as proposed. - Grub out stump.	10+	C1/2	167	7.3
T10	Daweyck Beech	10.5	170	N 1 E 2 S 1.5 W 1	N/A 2	Y	G	- Several partially included bark unions of branches. - Slightly biased crown to south-east due to partial suppression by neighbouring tree(s).	- Remove in order to allow construction as proposed. - Grub out stump.	40+	C1	13	2.04
T11	Silver Birch	11	320	N 3 E 3 S 3 W 3	2 4	EM	G	Stem bifurcates into co-dominant primary branches at a height of approximately 2m.		20+	B1/2	46	3.84
T12	Norway Maple	8	170	N 2.5 E 3 S 1 W 1.5	N/A 3	Y	M	Large 1.2m long partially occluded wound up west side of lower stem, with no signs of progressive decay within.	- Remove in order to allow construction as proposed. - Grind out stump.	10+	C1/2	13	2.04
T13	Horse Chestnut	8	190	N 1.5 E 3 S 1.5 W 0	N/A 3	Y	P	- Extensive bark loss to length of stem. - In mid stages of decline with short projected remaining safe life expectancy.	- Remove due to short projected remaining safe life expectancy. - Grind out stump.	<10	U	16	2.28
T14	Sycamore	11	270	N 4 E 4.5 S 3 W 4	2.5-NE 2.5	SM	P	- Extensive and widespread partially occluded squirrel damage to stem and branches. - Crown showing signs of a substantial reduction in vitality with extensive dieback. - Short projected remaining safe life expectancy.	- Remove due to short projected remaining safe life expectancy. - Grind out stump.	<10	U	33	3.24
T15	Redwood	15	320	N 2 E 1.5 S 1 W 1.5	N/A 6	SM	G	Slightly biased crown to north.	- Retain in context of proposal. - Protect RPA, as far as is practicable, throughout development.	40+	B1/2	46	3.84

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Page: 3 of 4

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T16	Maple	9.5	150	N 3 E 1 S 1 W 2	N/A 7	Y		■ Crown showing signs of a substantial reduction in vitality with extensive dieback. ■ In decline with short projected remaining safe life expectancy.	■ Remove due to short projected remaining safe life expectancy. ■ Grind out stump.	<10	U	1.8	10
T17	Norway Maple	11	240	N 3.5 E 3 S 3 W 3.5	6-N 3	Y	G	■ 1m long almost occluded wound to lower stem. ■ Stem bifurcates into co-dominant primary branches at a height of approximately 2m with a tight fork.	■ Remove in order to allow construction as proposed. ■ Grind out stump.	10+	C1/2	2.88	26
T18	Hawthorn	9	≤ 100 (ms)	N 3 E 3 S 3 W 3	N/A 2	M	M	■ Multi-stemmed from ground level. ■ Crown showing signs of a moderate reduction in vitality.	■ Remove in order to allow construction as proposed. ■ Grind out stump.	10+	C1/2	3.17	32
T19	Redwood	10	310	N 1.5 E 1.5 S 1.5 W 1	N/A 5	Y	G	■ No visible structural defects.	■ Retain in context of proposal. ■ Protect RPA, as far as is practicable, throughout development.	40+	B1/2	3.72	43
T20	Redwood	10	230	N 1.5 E 1.5 S 1 W 1	N/A 5	Y	G	■ No visible structural defects.	■ Retain in context of proposal. ■ Protect RPA throughout development.	40+	B1/2	2.76	24
G1	Hawthorn, Blackthorn, Elder	≤ 7	≤ 60 (ms)#	N ≤ 2.5 E ≤ 2.5 S ≤ 2.5 W ≤ 2.5	N/A ≥ 0.5	EM	M	■ Located on neighbouring land and not inspected in detail. ■ Loose group evidently formed from overgrown remnant hedge.	■ Protect RPAs throughout development.	10+	C1/2	≤ 1.76	≤ 10
G2	Leyland Cypress	≤ 8	≤ 2x180 (ts)	N ≤ 2 E ≤ 2 S ≤ 2 W ≤ 2	N/A ≥ 0	SM	M	■ Closely spaced linear group with inter-connecting crowns. ■ Crowns lifted to west due to presence of shipping container.	■ Remove in order to allow construction as proposed. ■ Grub out stumps.	10+	C1/2	≤ 3.05	≤ 29
G3	Bird Cherry, Elder, Hawthorn, Blackthorn	≤ 8	≤ 60 (ms)	N ≤ 3 E ≤ 3 S ≤ 3 W ≤ 3	N/A ≥ 0	Y-PM	P-G	■ Closely spaced group. ■ Poor quality.	■ Remove in order to allow construction as proposed. ■ Grub out stumps.	10+	C1/2	≤ 1.76	≤ 10

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Page: 4 of 4

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BS5837:2012 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	- 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 <i>Note: Category U trees can have existing or potential conservation value which it might be desirable to preserve; see BS5837:2012 paragraph 4.5.7.</i>	Red
Trees to be considered for retention		
	1 2 3	
	1 2 3	
Category A Trees of high quality with an estimated remaining life expectancy of at least 40 years	Mainly arboricultural qualities 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) Mainly landscape qualities Trees, groups or woodlands of particular visual importance as arboricultural and/or landscape features Mainly cultural values, including conservation Trees, groups or woodlands of significant conservation, historical, commemorative or other value (e.g. veteran trees or wood-pasture)	Green
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	Blue
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	Grey

3 2 0 1 3 0 3 8 9 P

DISCLAIMER

Survey Limitations: Unless otherwise stated all trees are surveyed from ground level using non-invasive techniques, in sufficient detail to gather data for and inform the design of the current project only. The disclosure of hidden crown and stem defects, in particular where they may be above a reachable height or where trees are ivy clad or in areas of ground vegetation, cannot therefore be expected. All obvious defects, however, are reported. Detailed tree safety appraisals are only carried out under specific written instructions. Comments upon evident tree safety relate to the condition of said tree at the time of the survey only.

Unless otherwise stated all trees should be re-inspected annually in order to appraise their on-going mechanical integrity and physiological condition. It should, however, be recognised that tree condition is subject to change, for example due to the effects of disease, decay, high winds, development works, etc. Changes in land use or site conditions (e.g. development that increases access frequency) and the occurrence of severe weather incidents are also significant considerations with regards tree structural integrity and trees should therefore be re-assessed in the context of such changes and/or incidents and inspected at intervals relative to identified and varying site conditions and associated risks.

Where trees are located wholly or partially on neighbouring private third-party land then said land is not accessed and our inspection is therefore restricted to what can reasonably be seen from within the site. Stem diameters of trees located on such land are estimated. Any subsequent comments and judgments made in respect of such trees are based on these restrictions and are our preliminary opinion only. Recommendations for works to neighbouring third-party trees are only made where a potentially unacceptable risk to persons and/or property has been identified during our survey or, if applicable, where permissible works are required to implement a proposed development. Where significant structural defects of third-party trees are identified and associated management works are considered essential to negate any risk of harm and/or damage then we will first attempt to inform the site occupier of the issues and, if not possible, then inform the relevant Council. Where a more detailed assessment is considered necessary then appropriate recommendations are set out in the Tree Survey Schedule.

Where tree stem locations are not included on the plan(s) provided then they are plotted at the time of the survey using, where appropriate and/or practicable, a combination of measurement triangulation and GPS co-ordination. Where this is not possible then locations are estimated. Restrictions in these respects are detailed in the report.

The potential influence of trees upon buildings or other structures resulting from the effects of their roots abstracting water from shrinkable load-bearing soils is not considered herein. The advice of a structural engineer must be sought with regard to appropriate foundation depths for new buildings, with reference to NHBC Standards Chapter 4.2 (NHBC, 2008).

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- TEMPORARY PROTECTIVE FENCING SPECIFICATION -

Construction Exclusion Zones (CEZs), enclosed by Temporary Protective Fencing, as detailed below and to be agreed with the Local Planning Authority (LPA), shall:

1. be retained in place throughout the development process, as specified in the 'Temporary Protective Fencing Construction' section below and detailed in BS5837:2012 Figure 2 (overleaf);
2. be sited in the area defined on the Tree Protection Plan (TPP);
3. be erected prior to any construction, demolition or excavation works and remain in place for the duration of the project;
4. preclude any delivery of site accommodation and/or materials and/or plant machinery;
5. preclude all construction related activity, with the sole exception of specified arboricultural works and any other works to be carried out under supervision that have been agreed by all parties; and
6. preclude the storage of all development related materials and substances including fuels, oils, additives, cement and/or any other deleterious substance.

Any incursion into CEZs must be by prior arrangement, following consultation with the LPA.

Temporary Protective Fencing Construction

1. Temporary protective fencing panels shall be weldmesh "Heras" panels of at least 2.0 metres in height.
2. The panels shall butt together and be securely fixed to a scaffold framework, as per 3 to 5 below.
3. The scaffold framework shall comprise of upright poles of at least 3.0 metres in length driven no less than 0.6 metres into the ground at maximum 3.0 metre centres with horizontal and diagonal poles fixed to the uprights, as per 4 to 5 below.
4. The two horizontal rail poles shall be attached to the uprights at heights of 0.6 and 1.8 metres with 3 no. clamps to each joint.
5. The diagonal scaffold pole struts be clamped to the top rail of the scaffold framework at a 45° angle and extend back into the CEZ and clamped to a 0.7 metre length of scaffold tube that shall be driven no less than 0.5m into the ground.
6. No fixing shall be made to any tree and all possible precautions shall be taken to prevent damage to tree roots when locating posts.
7. A 600mm x 300mm warning sign reading "TREE PROTECTION AREA KEEP OUT" (see Figure 1, below) shall be fixed to every 10.0 metre length of protective fencing.
8. On completion and prior to any demolition or construction works, site preparation, excavation or delivery of plant and materials, the Consulting Arboriculturist shall inspect the Temporary Protective Fencing.

Figure 1: CEZ Warning Sign

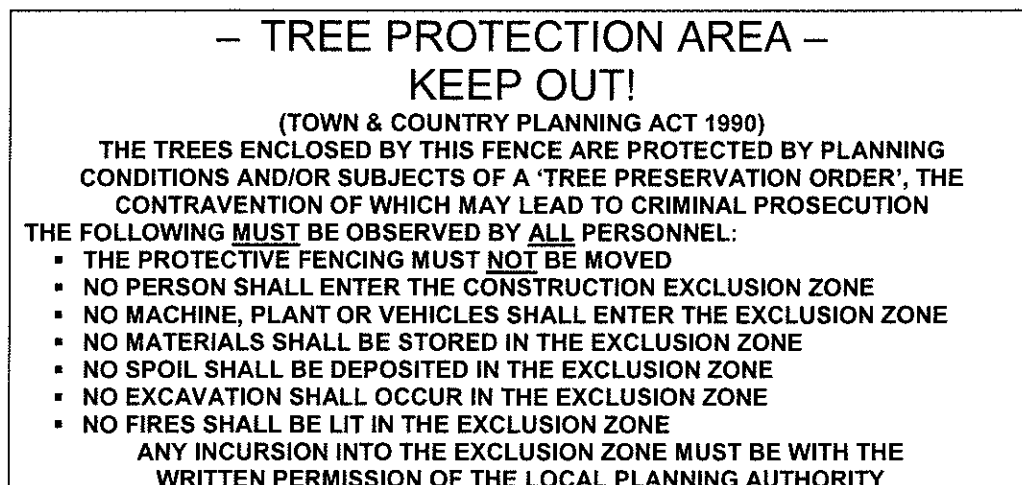


Figure 2: BS5837:2012 Default specification for protective barrier

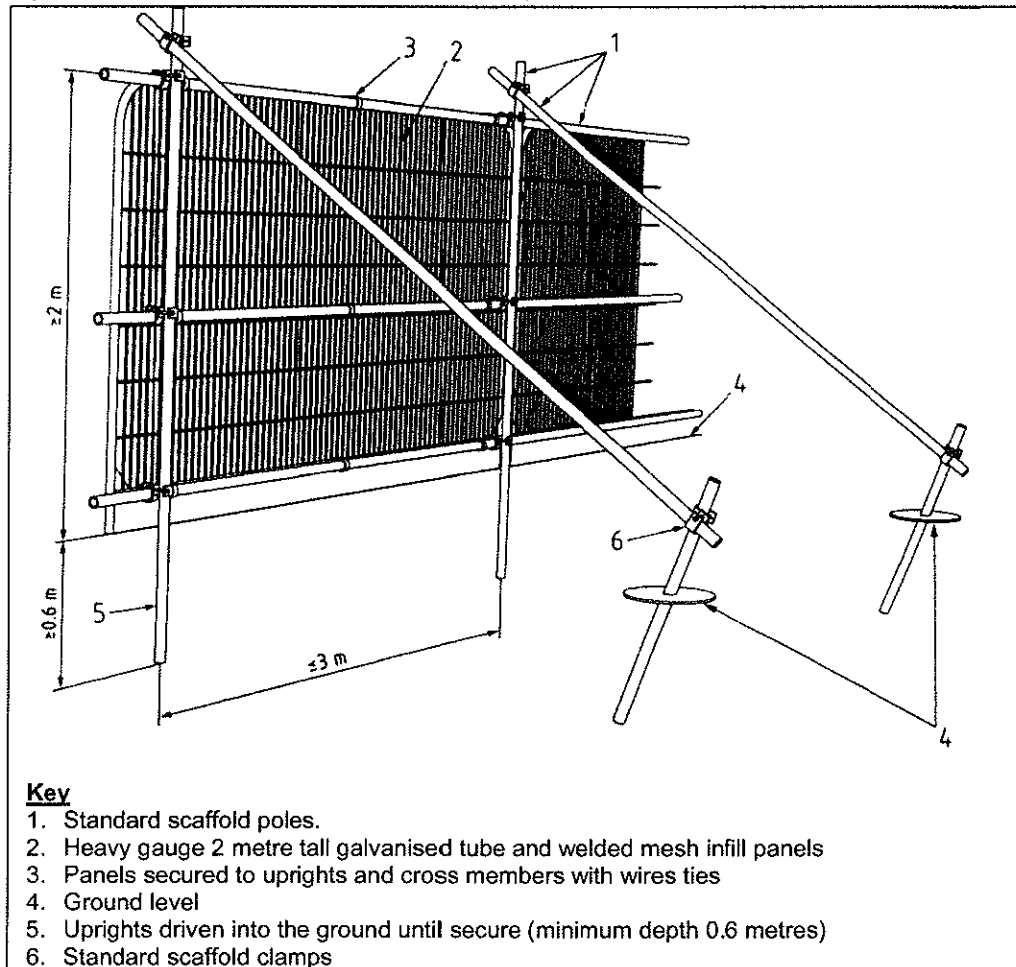
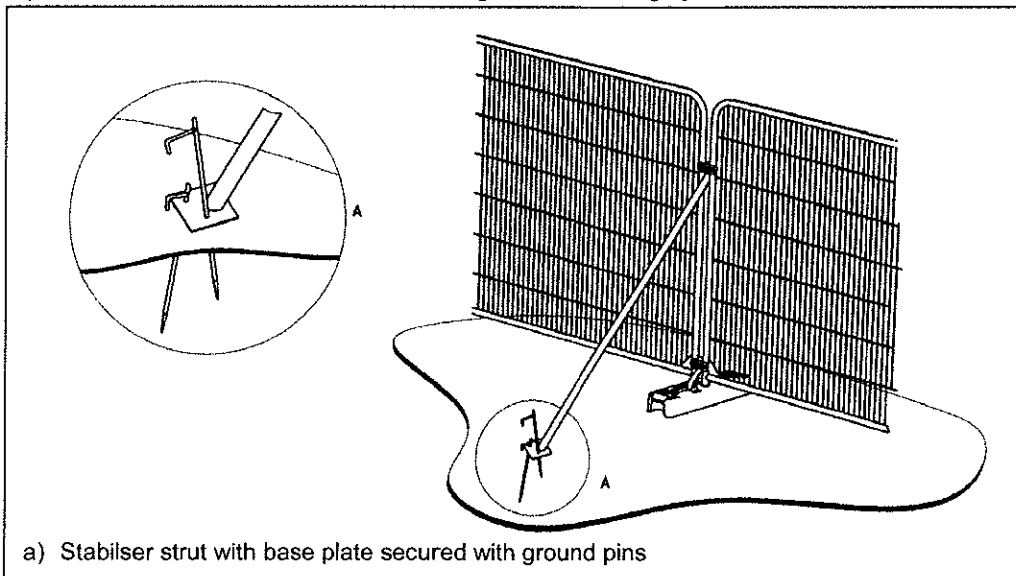


Figure 3: BS5837:2012 Examples of above-ground stabilising systems



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