



Arboricultural Impact Assessment

in Relation to Proposed Demolition of Existing Garage and
Construction of a Three-Storey Detached Dwelling and Two
Detached Garage and Home Office Units at



**Northlands, Ribblesdale Avenue,
Clitheroe, Lancashire, BB7 2HZ**

Prepared by:

Bowland 
Tree Consultancy Ltd

June 2016

ARBORICULTURAL IMPACT ASSESSMENT NORTHLANDS, CLITHEROE

CONTENTS

1. ARBORICULTURAL IMPACT ASSESSMENT
2. TREE SURVEY SCHEDULE & BS5837:2012 – TABLE 1
3. TEMPORARY PROTECTIVE FENCING AND GROUND PROTECTION SPECIFICATION
4. TREE CONSTRAINTS PLAN
5. TREE IMPACT PLAN

Contact Details

Bowland Tree Consultancy Ltd
7 Lakeland Close
Billington
Lancashire
BB7 9LN

T: 01254 825098
E: info@bowlandtreeconsultancy.co.uk



ARBORICULTURAL IMPACT ASSESSMENT	
Site:	Northlands, Ribblesdale Avenue, Clitheroe, Lancashire, BB7 2HZ
Proposal:	Demolition of existing garage and construction of a three-storey detached dwelling with detached garage and home office and an additional detached garage and home office for existing property
Survey Date:	1 April 2016
Report Date:	29 June 2016
Prepared by:	Jennie Keighley MSc TechArborA
Report Ref:	BTC1068
Agent for Client:	IWA Architects

Introduction and Rationale. Bowland Tree Consultancy Ltd was instructed to carry out an appraisal of the potential for proposed development works at the above site to impact upon trees and, in turn, to advise on appropriate protective measures for retained trees during the works where appropriate, and on facilitation pruning and/or felling works, where identified as necessary. Further to this instruction, I confirm that Kendall Rigg, visited the site on 1 April 2016 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 our 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 Constraints Plan (TCP) showing the site under consideration with pertinent tree constraints detailed. The Tree Impact Plan (TIP) also shows an overlay of the proposal, and any necessary tree removals indicated. The TCP and TIP are based on a topographical survey plan and site proposal plan, respectively, as prepared by the project agents, IWA Architects, and, for the purpose of this report, I presume the details of the plans supplied to be accurate.

The Site and the Proposal. The site under consideration is located in a residential area on the northern outskirts of the town of Clitheroe, approximately one kilometre from the town centre, within the administrative boundaries of Ribble Valley Borough Council. It currently consists of the garden area to the north of the existing residential property, Northlands, and comprises various planted shrub beds, paved areas, a lawn with a hedge running through it, and an area of macadam around a detached garage/workshop.

The site is bordered by neighbouring residential properties and their gardens to the north, east, and south, and by Ribblesdale Avenue to the west and north-west, from which there is single existing vehicular access to Northlands. According to the topographical survey plan, there is a very subtle slope upwards of approximately 1 metre from north-west to south-east.

I am informed, by IWA Architects, that the proposal is for the demolition of the existing garage/workshop, the construction of a single three-storey detached dwelling, and the construction of two detached garage and home office units, one for the proposed property and one for the existing property, Northlands, with associated widening of the existing pedestrian access to Northlands to allow for vehicles (see TIP). The proposed property will utilise the existing vehicular access point to Northlands.

The Trees. Three individual trees (prefixed 'T'), three groups of trees (prefixed 'G'), and three hedges (prefixed 'H') were surveyed in respect of the proposals and their associated potential to impact upon said vegetation, and the respective constraints of these items are plotted on the appended TCP and TIP.

The surveyed vegetation consists predominantly of Beech trees located on neighbouring land, but also includes Privet hedges, a Holly, a Plum, and a pair of Golden Cypress located within the site boundaries. The trees range from young to mature in age, and stand at heights of up to 20 metres, have maximum diametrical crown spreads of up to approximately 20 metres, and stem diameters of up to approximately 900 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.

The trees were appraised in accordance with BS5837:2012 Table 1 (appended) and, as detailed in Table A, overleaf, one tree and two groups were allocated moderate retention values of 'B', and two trees, one group, and three hedges were allocated low retention values of 'C'. 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 Vegetation

	Ret. Cats.	Tree/Group/Hedge Numbers	Totals
Those of a high quality that should be afforded appropriate consideration in the context of development	'A'	-	-
Those of a moderate quality that should be afforded appropriate consideration in the context of development	'B'	T1 G2, G3	1 Tree 2 Groups
Those of a low quality that should be afforded appropriate consideration in the context of development	'C'	T2, T3 G1 H1, H2, H3	2 Trees 1 Group 3 Hedges
Those considered unsuitable for retention	'U'	-	-
			= 3 Trees, 3 Groups & 3 Hedges in Total

The Proposal's Projected Impacts on Trees. As detailed in Table B, below, construction of the development as proposed is projected to require the removal of one low quality (i.e. 'C' category) group, one low quality hedge and part of one further low quality hedge.

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

	Ret. Cats.	Removals necessary to implement development	Removals recommended regardless of development	Total no. of tree removals
Those of a high quality that should be afforded appropriate consideration in the context of development	'A'	-	-	-
Those of a moderate quality that should be afforded appropriate consideration in the context of development	'B'	-	-	-
Those of a low quality that should be afforded appropriate consideration in the context of development	'C'	G1 H1, part of H2	-	1 Group 1 Hedge 1 partial Hedge
Those that should be removed for sound management reasons regardless of site plans	'U'	-	-	-
Totals		1 Group 1 Hedge 1 partial Hedge	-	= 1 Group, 1 Hedge & 1 partial Hedge

Nonetheless, I would note that the proposed tree losses are all of low quality. In this respect an approximately 3 metre section of hedge H2 is proposed for removal in order to widen the existing pedestrian access to Northlands to form vehicular access.

Mitigation for Projected Tree Losses. The proposed property has a sizeable garden area, particularly to the east, which can accommodate several new trees as part of site landscaping, which is projected to sufficiently mitigate for the necessary tree losses. In turn, the provision of the new tree planting can be guaranteed through the imposition of a suitably worded landscape condition attached to a planning approval.

Tree Retention Recommendations. Adequate protection of retained trees' root protection areas (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 development, usually through the installation of temporary protective fencing to form a Construction Exclusion Zone (CEZ). Where it is impractical to fence the full extent of the RPA, temporary ground protection measures should be used to protect any exposed areas. 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 TCP and TIP. Trees with RPAs requiring protection from the development works are indicated in the TSS. A Temporary Protective Fencing and Ground Protection Specification is appended which gives details of the purpose and the type and construction of the default temporary protective fencing and ground protection that should normally be used.

In respect of these matters the guidance recommends that the associated working methods and procedures be detailed in an Arboricultural Method Statement and on a Tree Protection Plan, which describe the timing, 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 therefore be conditioned as part of a planning approval.

In addition to the points raised herein we 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 demolition of the existing garage/workshop, the construction of a three-storey detached dwelling, and the construction of two detached garages with home offices for the existing and proposed properties, with associated widening of the access to Northlands to allow for vehicles, is proposed at the site under consideration.

As such, three individual trees, three groups of trees, and three hedges were surveyed in respect of the proposals and their associated potential to impact upon said vegetation.

One tree and two groups have moderate retention values, and two trees, one group, and three hedges have low retention values.

From the information provided, our appraisal determined that construction of the development as proposed is projected to require the removal of one low retention value group, one low retention value hedge, and part of one further low retention value hedge.

Nonetheless, the identified losses are all of low quality and can be adequately mitigated for through new tree planting as part of site landscaping.

In turn, the existing trees that are to be retained can be adequately protected throughout the development in accordance with BS5837:2012, provided that various recommendations made herein are followed, in particular the provision of adequate protection of the trees' Root Protection Areas.

As such, the production of an Arboricultural Method Statement and a Tree Protection Plan can be conditioned to a planning approval in order to ensure that suitable procedures, working methods and protective measures are correctly considered and implemented.

Jennie Keighley MSc TechArborA
Consulting Arboriculturist

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 BS 8545:2014 Trees: from Nursery to Independence in the Landscape – Recommendations.

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 our 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 we 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.

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 located in areas of restrictive ground vegetation, cannot therefore be expected. 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 regard to 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 and other measurements 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 inform the relevant Council of the matter. 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 by the arboriculturist 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.

This document is intended as a guide to identify key tree related constraints to site development only, and the potential influence of trees upon existing or proposed buildings or other structures resulting from the effects of their roots abstracting water from shrinkable load-bearing soils is not considered herein. The tree survey information in its current form should not therefore be considered sufficient to determine appropriate foundation depths for new buildings. Accordingly, an updated survey, with reference to the current NHBC Standards Chapter 4.2 - Building Near Trees, must therefore be prepared for the specific purpose of informing suitable foundation depths subsequent to planning approval being granted. The advice of a structural engineer must also be sought with regard to appropriate foundation depths for new buildings.

Copyright & Non-Disclosure Notice: The content and layout of this report are subject to copyright owned by Bowland Tree Consultancy Ltd, save to the extent that copyright has been legally assigned to us by another party or is used by Bowland Tree Consultancy Ltd under license. This report may not be copied or used without our prior written agreement for any purpose other than those indicated.

Third Parties: Any disclosure of this document to a third party is subject to this disclaimer. The report was prepared by Bowland Tree Consultancy Ltd at the instruction of and for use by our client. This report does not in any way constitute advice to any third party who is able to access it by any means. Bowland Tree Consultancy Ltd excludes to the fullest extent lawfully permitted all liability whatsoever for any loss or damage arising from reliance on the contents of this report.

TREE SURVEY SCHEDULE & BS5837:2012 'TABLE 1'



TREE SURVEY SCHEDULE FOR ARBORICULTURAL IMPACT APPRAISAL							
Site:		Northlands, Ribblesdale Avenue, Clitheroe, Lancashire, BB7 2HZ					
Agent for Client:		IWA Architects					

Surveyor:	Kendall Rigg HND TechArborA
Survey Date:	1 April 2016
Job Ref:	BTC1068

Page: 1 of 2

No.	Species	Height	Stem Diam.	Branch Spread	Branch & Canopy Clearances	Life Stage	PC	General Observations and Comments	Management Recommendations	ERC	Cat. Grade	RPA (m²)	RPA Radius (m)
T1	Beech	15	1x385 1x170 (ts)#	N 0 E 0 S 6 W 4	0.1-W 5	SM	G	- Located on neighbouring land and therefore not inspected in detail. - Part of a larger linear group. - Bifurcates at base. - Moderate stem lean to south-west due to presence of neighbouring trees.	Protect Root Protection Area (RPA) throughout development using Temporary Protective Fencing (specification appended) to form a Construction Exclusion Zone (CEZ).	20+	B2	80	5.05
T2	Holly	3.5	90	N 1 E 1 S 1 W 1	0.5-S 0.3	SM	G	Crown regularly managed.	- Retain in context of proposed development. - Protect RPA throughout development using Temporary Protective Fencing to form a CEZ.	10+	C1	4	1.08
T3	Plum	5	2x90 1x50 (ms)	N 1 E 1 S 3 W 1	1-S 1	SM	M	- Growing within 250mm of brick built boundary wall. - Trifurcates at base. - Southern stem leaning south-east. - Crown biased south-east.	- Retain in context of proposed development. - Protect RPA throughout development using Temporary Protective Fencing to form a CEZ.	<10	C1	10	1.8
G1	2no. Golden Cypress	≤ 2	N/A	N ≤ 0.5 E ≤ 0.5 S ≤ 0.5 W ≤ 0.5	N/A ≥ 0	SM	G	- Closely spaced group. - Managed crowns.	Remove in order to construct development as proposed.	10+	C2	N/A	≤ 0.5
G2	17no. Beech	≤ 20	≤ 600#	N ≤ 4 E ≤ 4 S ≤ 8 W ≤ 4	4-S ≤ 6	SM-M	G	- Located on neighbouring land and therefore not inspected in detail. - Part of linear group, evidently formed from an out-grown hedge. - Mixture of semi-mature to mature trees. - Crowns biased to south due to proximity of a second linear row of Beech trees to north.	- Retain in context of proposed development. - Protect RPAs throughout development using Temporary Protective Fencing to form a CEZ. - Where a working area is required and fencing is impractical, any exposed areas of RPA should be protected by Temporary Ground Protection (specification appended).	20+	B2	≤ 137	≤ 6.6

Headings and Abbreviations:

No.	Allocated sequential reference number - Tree ('T'), Group ('G'), Woodland ('W') or Hedge ('H') reference number - refer to plan and to numbered tags where applicable
Species:	Common name
Height:	In metres, to nearest half 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
Stem Diam.:	Stem diameter in millimetres, to nearest 10mm - measured and calculated as per Annex C of BS5837:2012. MS = multi-stemmed, TS = twin-stemmed
Branch Spread:	Crown radius measured (or estimated where considered appropriate) from the four cardinal points (north, east, south and west) to give an accurate visual representation of the crown
Branch & Canopy Clearances:	Existing 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.
Life Stage:	Estimated age class - Y = young, SM = semi-mature, EM = early-mature, M = mature, PM = post-mature
PC:	Physiological Condition - a measure of the tree(s)' overall vitality, i.e. D = Dead, MD = Moribund, P = Poor, M = Moderate, G = Good
General Observations and Comments:	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.
Management Recommendations:	Either Preliminary or In Consideration of the Proposal - In the case of Arboricultural 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
ERC:	Surveys take the proposed development into consideration with recommendations made accordingly. More than one option may be given if considered appropriate
Cat. Grade:	Estimated Remaining Contribution - in years as per BS5837:2012 (i.e. <10, 10+, 20+, 40+)
RPA m²:	Category Grading - tree retention value listed as U, A, B or C - in accordance with BS5837:2012 Table 1
RPA Radius (m):	Root Protection Area in m² - calculated area around the tree that must be appropriately protected throughout the development process in order avoid root damage
# (Estimated Dimensions):	Root Protection Area Radius - in metres measured from the centre of the stem to the line of tree protection
	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

TREE SURVEY SCHEDULE FOR ARBORICULTURAL IMPACT APPRAISAL							
Site:		Northlands, Ribblesdale Avenue, Clitheroe, Lancashire, BB7 2HZ					
Agent for Client:		IWA Architects					

Surveyor:	Kendall Rigg HND TechArborA
Survey Date:	1 April 2016
Job Ref:	BTC1068

No.	Species	Height	Stem Diam.	Branch Spread	Branch & Canopy Clearances	Life Stage	PC	General Observations and Comments	Management Recommendations	ERC	Cat. Grade	RPA (m²)	RPA Radius (m)	
G3	10no. Beech	≤ 20	≤ 900#	N E S W	≤ 11 ≤ 8 ≤ 9 ≤ 9	3-N ≤ 5	M	G	- Located on neighbouring land and therefore not inspected in detail. - Part of linear group, evidently formed from an out-grown hedge. - Mixture of early-mature to mature trees. - Crowns biased to north due to proximity of a second linear row of Beech trees to south. - Three trees at western end of group have crowns biased to south and west.	- Retain in context of proposed development. - Protect RPAs throughout development using Temporary Protective Fencing to form a CEZ. - Where a working area is required and fencing is impractical, any exposed areas of RPA should be protected by Temporary Ground Protection.	20+	B2	≤ 366	≤ 10.8
H1	Privet	≤ 1.5	N/A	≤ 1 wide	N/A ≤ 0	EM	G	Managed hedge.	Remove in order to construct development as proposed.	10+	C2	N/A	≤ 0.5	
H2	Privet	≤ 1.5	N/A	≤ 1 wide	N/A ≤ 0	EM	G	Managed boundary hedge with gap for path and driveway entrance.	- Remove an approximately 3m length in order to widen pedestrian access point to Northlands to form vehicular access. - Ensure protection of retained northernmost section throughout development.	10+	C2	N/A	≤ 0.5	
H3	Beech	≤ 3.5	≤ 1x175 1x125 (ts)#	≤ 2 wide	N/A ≤ 0	Y-SM	M	- Located on neighbouring land and therefore not inspected in detail. - Managed boundary hedge.	- Retain in context of proposed development. - Ensure protection throughout development.	10+	C2	N/A	≤ 2	

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
	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)	Green
Category B Those of moderate quality and value: those in such a condition as to make a significant contribution. A minimum of 20 years is suggested.	Trees that might be included in the high category, but are downgraded because of impaired condition. Examples include the presence of remediable defects including unsympathetic past management and minor storm damage	Trees present in numbers, usually as groups or woodlands, so they form distinct landscape features which attract a higher collective rating than they might as individuals. But which are not, individually, essential components of formal or semi-formal arboricultural features. For example, trees of moderate quality within an avenue that includes better, A category specimens. Or trees which are internal to the site, therefore individually having little visual impact on the wider locality	Trees with clearly identifiable conservation or other cultural benefits	Blue
Category C Those trees of low quality and value: currently in adequate condition to remain until new planting could be established - a minimum of 10 years is suggested - or young trees with a stem diameter below 150 mm	Trees not qualifying 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 screening benefit	Trees with very limited conservation or other cultural benefits	Grey
	Note – Whilst C category trees will usually not be retained where they would impose a significant constraint on development, young trees with a stem diameter of less than 150mm should be considered for relocation			

- TEMPORARY PROTECTIVE FENCING & GROUND PROTECTION 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 protected throughout the development process, as specified in the 'Temporary Protective Fencing Construction' section below and detailed in BS5837:2012 Figure 2 (overleaf) and, if applicable, as defined by area on the Tree Protection Plan (TPP);
2. be erected prior to any construction, demolition or excavation works and remain in place for the duration of the project;
3. preclude any delivery of site accommodation and/or materials and/or plant machinery;
4. 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
5. 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, overleaf) 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.

Temporary Ground Protection

1. Any necessary Temporary Ground Protection shall conform to Figure 4 (see overleaf).
2. The Ground Protection Area shall be left undisturbed and covered by a semi-permeable geotextile membrane which shall, in turn, be covered by a compressible layer consisting of a material such as woodchip.
3. Side-butting scaffold boards shall then be fitted to cover the Ground Protection Area.
4. Prior to any demolition or construction works, site preparation, excavation or delivery of plant and materials, the Arboricultural Consultant shall inspect the Temporary Ground Protection.
5. The Temporary Ground Protection shall remain in place until completion of the project and only removed following receipt of written permission from the LPA.

– CONSTRUCTION EXCLUSION ZONE – KEEP OUT!

(TOWN & COUNTRY PLANNING ACT 1990)
THE TREES ENCLOSED BY THIS FENCE ARE PROTECTED BY
PLANNING CONDITIONS AND/OR SUBJECTS OF A 'TREE
PRESERVATION ORDER', THE CONTRAVENTION OF WHICH MAY
LEAD TO CRIMINAL PROSECUTION

THE FOLLOWING **MUST** BE OBSERVED BY **ALL** PERSONNEL:

- THE PROTECTIVE FENCING MUST **NOT** BE MOVED
- NO PERSON SHALL ENTER THE CONSTRUCTION EXCLUSION ZONE
- NO MACHINE, PLANT OR VEHICLES SHALL ENTER THE EXCLUSION ZONE
- NO MATERIALS SHALL BE STORED IN THE EXCLUSION ZONE
- NO SPOIL SHALL BE DEPOSITED IN THE EXCLUSION ZONE
- NO EXCAVATION SHALL OCCUR IN THE EXCLUSION ZONE
- NO FIRES SHALL BE LIT IN THE EXCLUSION ZONE

ANY INCURSION INTO THE EXCLUSION ZONE MUST BE WITH THE
WRITTEN PERMISSION OF THE LOCAL PLANNING AUTHORITY

Figure 1: CEZ Warning Sign

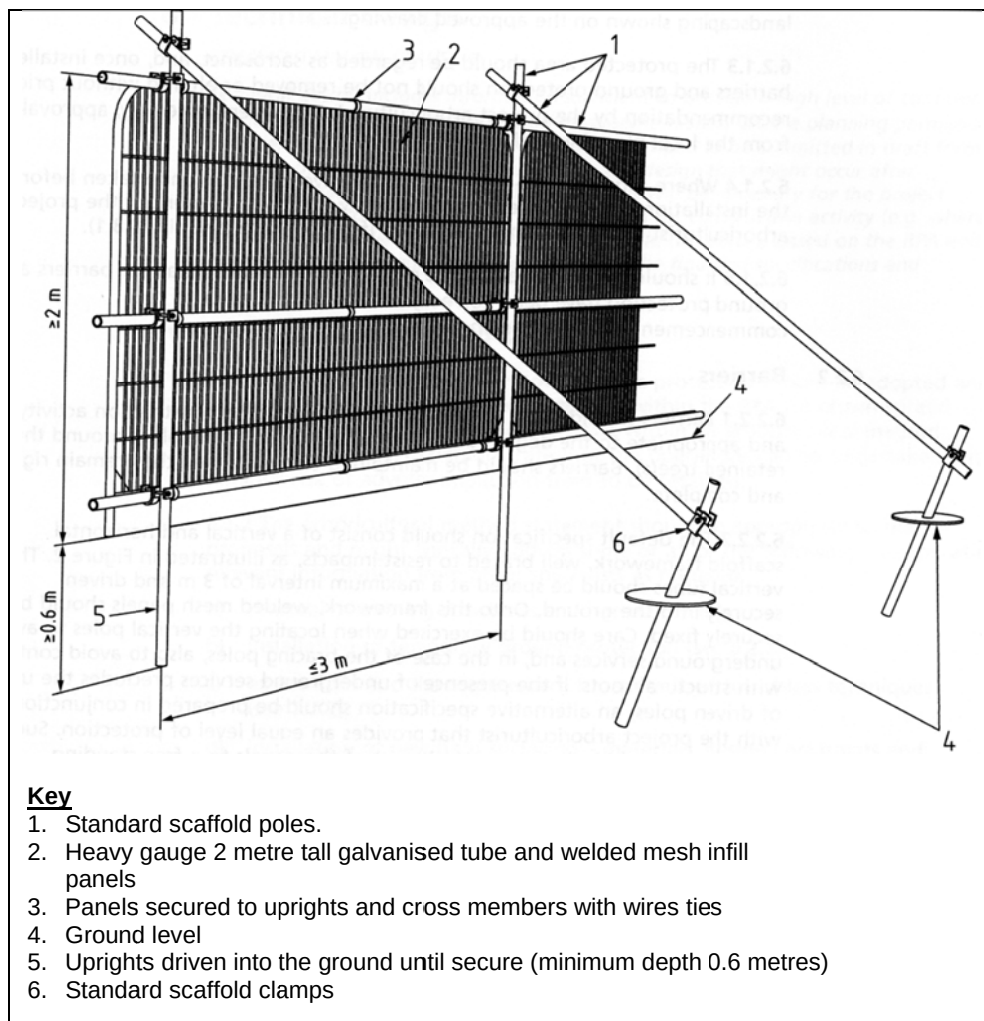


Figure 2: BS5837:2012 Default specification for protective barrier

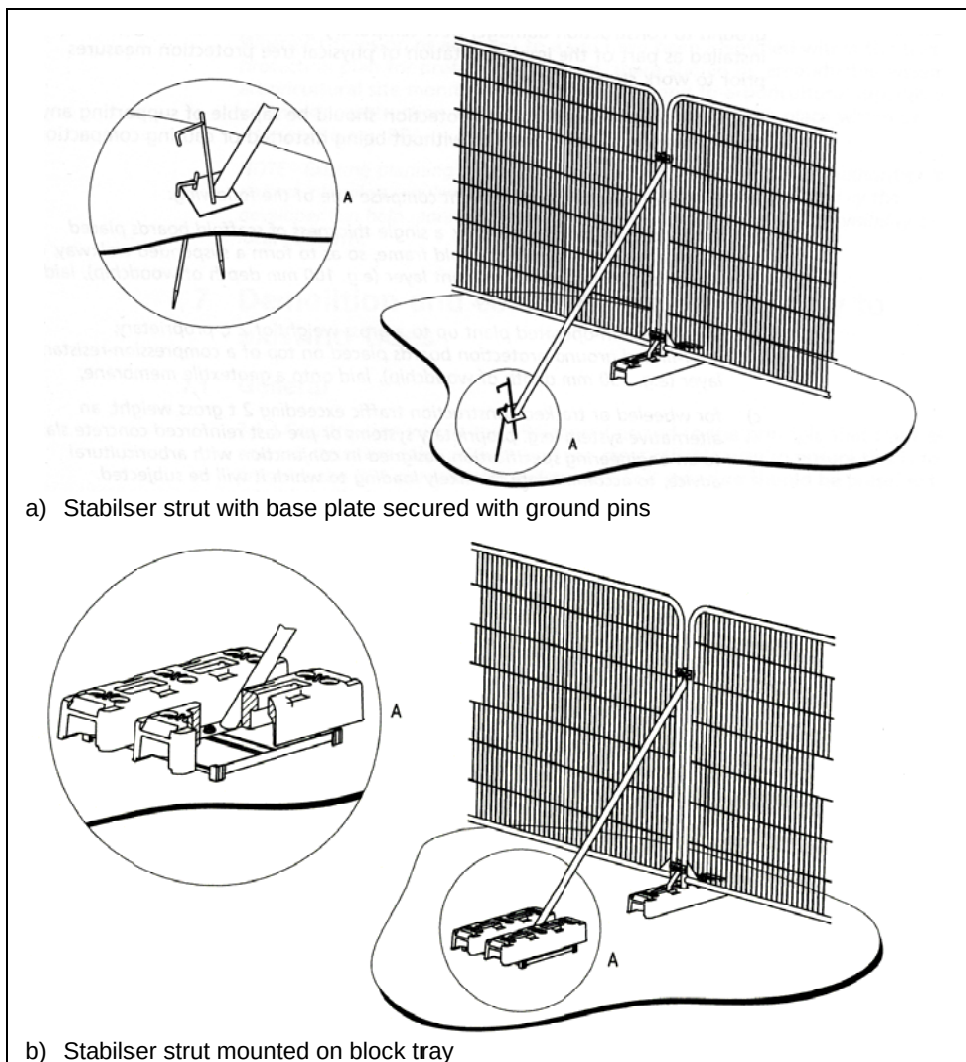


Figure 3: BS5837:2012 Examples of above-ground stabilising systems

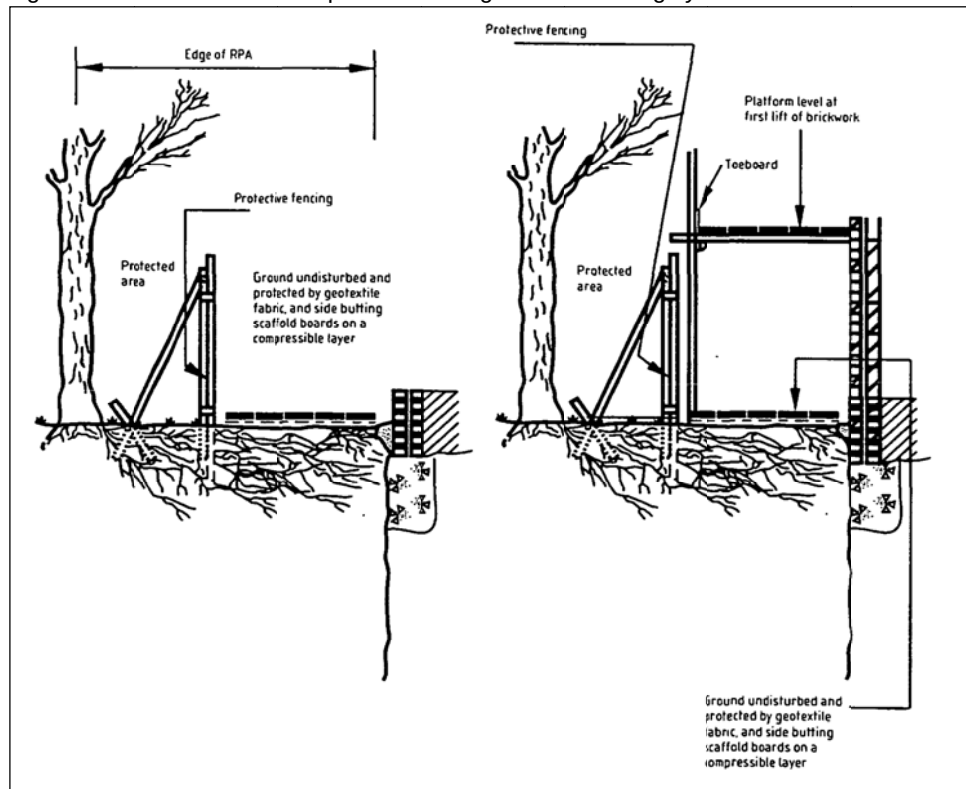


Figure 4: Temporary Ground Protection – Recommended Construction



Important: The original version of this plan was produced in colour, which is essential to the plan's interpretation and usability. As such, a monochrome copy should not be relied upon

KEY

T = Individual Tree
G = Group of Trees
H = Hedge

Please refer to associated Tree Survey Schedule for specific details in respect of items below:

Tree Categorisations:

Those to be Considered for Retention:

Category 'A' Tree/Group/Hedge
Those of a High Quality with an Estimated Remaining Life Expectancy of at Least 40 Years

Category 'B' Tree/Group/Hedge
Those of a Moderate Quality with an Estimated Remaining Life Expectancy of at Least 20 Years

Category 'C' Tree/Group/Hedge
Those of Low Quality with an Estimated Remaining Life Expectancy of at Least 10 Years, or Young Trees

Those Considered Unsuitable for Retention:

Category 'U' Tree/Group/Hedge
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

Root Protection Areas (RPAs):

RPAs
Area(s) of Ground Around Trees that Should be Protected Throughout Development Works with Protective Fencing to form a Construction Exclusion Zone

Project:
NORTHLANDS
RIBBLESDALE AVENUE
CLITHEROE
LANCASHIRE
BB7 2HZ

Agent for Client:
IWA ARCHITECTS

Title:
TREE CONSTRAINTS PLAN
in Relation to Residential Development Proposal

Scale: 1:200@A3
Date: April 2016
Drawn by: JK
Checked by: KR

Bowland

Tree Consultancy Ltd

e: info@bowlandtreeconsultancy.co.uk
t: 01254 825098

Ref: BTC1068-TCP

Rev:



Important: The original version of this plan was produced in colour, which is essential to the plan's interpretation and usability. As such, a monochrome copy should not be relied upon

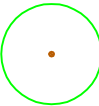
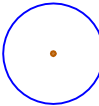
KEY

- T = Individual Tree
- G = Group of Trees
- H = Hedge

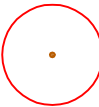
Please refer to associated Arboricultural Impact Assessment for specific details in respect of items below:

Tree Categorisations:

Those to be Considered for Retention:

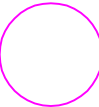
-  Category 'A' Tree/Group/Hedge
Those of a High Quality with an Estimated Remaining Life Expectancy of at Least 40 Years
-  Category 'B' Tree/Group/Hedge
Those of a Moderate Quality with an Estimated Remaining Life Expectancy of at Least 20 Years
-  Category 'C' Tree/Group/Hedge
Those of Low Quality with an Estimated Remaining Life Expectancy of at Least 10 Years, or Young Trees

Those Considered Unsuitable for Retention:

-  Category 'U' Tree/Group/Hedge
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

Note: Trees with their identification numbers labelled in grey are recommended for removal in the context of the development

Root Protection Areas (RPAs):

-  RPAs
Area(s) of Ground Around Trees that Should be Protected Throughout Development Works with Protective Fencing to form a Construction Exclusion Zone - see Temporary Protective Fencing & Ground Protections Specification

Project:
NORTHLANDS
RIBBLESDALE AVENUE
CLITHEROE
LANCASHIRE
BB7 2HZ

Agent for Client:
IWA ARCHITECTS

Title:
TREE IMPACT PLAN
in Relation to Proposed Demolition of Existing Garage and Construction of a Detached Three-Storey Dwelling and Two Detached Garage and Home Office Units

Scale: 1:200@A3
Date: June 2016
Drawn by: JK
Checked by: KR

