Arboricultural Impact Assessment

in Relation to Proposed Extension of Dwelling and Roof Reconstruction at

Cibola, Pendleton, Clitheroe, Lancashire, BB7 1PT

Prepared by:

Bowland Tree Consultancy Ltd

September 2016

CONTENTS

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Project No.:	BTC1186
Site:	Cibola, Pendleton, Clitheroe, Lancashire, BB7 1PT
Agent for Client:	Sunderland Peacock & Associates Ltd.
Client:	Dr Torquil Hutchison
Council:	Ribble Valley Borough Council
Survey Date:	14 September 2016
Prepared by:	Jennie Keighley MSc TechArborA
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ARBORICULTURAL IMPACT ASSESSMENT	
Site:	Cibola, Pendleton, Clitheroe, Lancashire, BB7 1PT
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Introduction and Rationale. Bowland Tree Consultancy Ltd was instructed to carry out an appraisal of the potential for the proposed extension and roof reconstruction at the above site to impact upon trees and, in turn, to advise on appropriate protective measures for retained trees 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 14 September 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 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 Protection Plan (TPP).

The TPP shows the existing site under consideration with pertinent tree constraints detailed, an overlay of the proposal showing any associated tree impacts, and the recommended positioning of temporary protective fencing in order to protect retained trees. The plan is based on an OS existing site plan, on which I have drawn the extent of the proposed extension using the dimensions outlaid in the proposed floor plan provided by the client's agent, Sunderland Peacock and Associates Ltd., 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 the village of Pendleton, Lancashire, approximately three kilometres south-east of the town of Clitheroe, within the administrational boundaries of Ribble Valley Borough Council. It is currently comprised of a detached bungalow with surrounding garden area and a small brook running parallel to the south-eastern boundary. There are several mature trees around the site boundaries and smaller fruit trees and ornamentals planted in the front and rear gardens.

The site is bordered to the north by an evidently unnamed road, from which there is vehicular access, to the east by a neighbouring residential property, to the south by agricultural pastureland, and to the west by the churchyard of the neighbouring Parish Church of All Saints. Although I was not provided with a topographical survey plan detailing existing site levels, I did not note there to be any significant changes in ground levels within the site boundaries, with the exception of the relatively gentle banks leading down to the brook at the far rear of the property.

I am informed, by the client's agent, that the proposal is for a small extension to the north-east corner of the existing dwelling, as detailed on the TPP, and the reconstruction of the property's roof, from part felt flat roof and part felt pitched roof to a fully slate pitched roof, including the creation of a first floor.

The Trees. Seven individual trees (prefixed 'T'), six groups of trees (prefixed 'G') and two 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 TPP.

The Town & Country Planning Act (1990) (the Act) and associated regulations empower Local Planning Authorities (LPAs) to protect trees in the interests of amenity by making Tree Preservation Orders (TPOs). The Act also affords protection for trees of over 75mm diameter that stand within the curtilage of a Conservation Area (CA). Subject to certain exemptions, an application must be made to the LPA in question to carry out works upon or to remove trees that are subject to a TPO, whilst six weeks' notice of intention must be given to carry out works upon or to remove trees within a CA that are not protected by a TPO.

According to Ribble Valley Borough Council's website, the site is just beyond, but not within, the Pendleton Conservation Area and none of the trees within its perimeters are the subject of a TPO. Surveyed tree numbers T2 and G4, in the neighbouring churchyard to the west, however, do fall within the Pendleton Conservation Area and are, therefore, afforded the associated protection. It is advisable to approach the LPA directly to check for any statutory tree protection prior to scheduling or undertaking any tree works that are not directly related to the implementation of a detailed planning application.

The surveyed vegetation consists of several deciduous and evergreen broadleaf and evergreen coniferous species including Ash, Apple, Holly, and Cypress. The trees range from young to mature in age, stand at heights of up to 18 metres, have maximum diametrical crown spreads of up to 22 metres, and stem diameters of up to 870 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.

Under the UK's planning system, trees are a material consideration in the planning and development process. Nonetheless, only trees of a suitable quality and value should be considered a material constraint to development.

The trees were appraised in accordance with BS5837: 2012 Table 1 (appended) and, as detailed in Table A, below, one tree was allocated a high retention value of 'A', one tree and one group were allocated moderate retention values of 'B', five trees, four groups and two hedges were allocated low retention values of 'C', and one group was considered unsuitable for retention (i.e. 'U' category). 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'**	T2	*1 Tree*
Those of a moderate quality that should be afforded appropriate consideration in the context of development	**'B'**	T6 G4	*1 Tree* *1 Group*
Those of a low quality that should be afforded appropriate consideration in the context of development	**'C'**	T1, T3, T4, T5, T7 G1, G2, G5, G6 H1, H2	*5 Trees* *4 Groups* *2 Hedges*
Those considered unsuitable for retention	**'U'**	G3	*1 Group*
			= 7 Trees, 6 Groups and 2 Hedges in Total

The Proposal's Projected Impacts on Trees. As detailed in Table B, below, from the information provided to date, I estimate that construction of the development as proposed is not projected to require the removal of any trees. One 'U' category group, however, is recommended for removal for reasons unrelated to the development.

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'**	-	-	-
Those that should be removed for sound management reasons regardless of site plans	**'U'**	-	G3	*1 Group*
Totals		-	*1 Group*	***= 1 Group in Total***

Tree Retention Recommendations. Adequate protection of retained trees' RPAs during demolition and 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). 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 TPP. The TPP shows the recommended positioning of the temporary protective fencing and a Temporary Protective Fencing Specification is appended, which gives details of the purpose and the type and construction of the default temporary protective fencing that should normally be used.

Specific details regarding the type of temporary fencing that will be suitable for this development, along with details of any special working methods, should be included in an Arboricultural Method Statement (AMS). Essentially, this document describes 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 AMS can be conditioned as part of a planning approval.

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. An extension to the existing dwelling and reconstruction of the roof is proposed at the site under consideration.

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

One tree was allocated a high retention value, one tree and one group were allocated moderate retention values, five trees, four groups, and two hedges were allocated low retention values, and one group was considered unsuitable for retention.

From the information provided, my appraisal determined that construction of the development is not projected to require the removal of any trees, although one 'U' category group is recommended for removal for reasons unrelated to the development.

Overall therefore, I conclude that the existing trees that are to be retained can be adequately protected throughout the development in accordance with BS5837: 2012, provided that the range of recommendations made herein are followed.

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.

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		Surveyor:	Jennie Keighley MSc TechArborA	Page: 1 of 3
Site:	Cibola, Pendleton, Clitheroe, Lancashire, BB7 1PT	Survey Date:	14 September 2016	
Client:	Dr T Hutchison	Job Ref:	BTC1186	

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	Holly	11.5	420	N E S W	4.5 4.5 4.5 4.5	3-S 3	M	M	▪ Severe stem curvature west, corrects by a height of 1.25m. ▪ Bifurcates at a height of 1.75m. ▪ Light ivy up eastern side of stem to mid-crown. ▪ Occasional decaying branch stubs and partially occluded wounds in lower crown.	▪ Retain in context of proposed development. ▪ Ensure protection throughout development.	10+	C1	80	5.04
T2	Beech	17	500#	N E S W	11 11 11 11	5-S 1.75	M	G	▪ Located on neighbouring land and therefore not inspected in detail. ▪ Crown overhangs site by up to 4m.	▪ Retain in context of proposed development. ▪ Ensure protection throughout development.	40+	A1	113	6
T3	Holly	12	350#	N E S W	3.5 3.5 4 4	4-E 2	M	M	▪ Growing in hedge H1 and therefore unable to inspect base. ▪ Numerous adventitious growths emerging from old pruning wounds around upper stem.	▪ Retain in context of proposed development. ▪ Protect Root Protection Area (RPA) throughout development using Temporary Protective Fencing (specification appended) to form a Construction Exclusion Zone (CEZ).	10+	C1	55	4.2
T4	Holly	5	1x110 1x110 1x70 (ms)	N E S W	1.5 1.5 1.5 1.5	1.25-S 1	SM	G	▪ Multi-stemmed from ground level. ▪ Stem bases in contact with wooden post fence.	▪ Retain in context of proposed development. ▪ Protect RPA throughout development using Temporary Protective Fencing to form a CEZ.	10+	C1	13	2.05
T5	Hawthorn	4	2x200 (ts)#	N E S W	2 2 2 2	2 2	M	M	▪ Growing on opposite side of brook. ▪ Base in contact with timber post and rail fence. ▪ Very heavy ivy load to mid-crown.	▪ Retain in context of proposed development. ▪ Protect RPA throughout development using Temporary Protective Fencing to form a CEZ.	10+	C1	36	3.39
T6	Common Ash	17	870	N E S W	8 7 6 6	5-N 3	M	M	▪ Growing on opposite side of brook. ▪ Moderate ivy load up southern and eastern sides of stem to lower crown. ▪ Slight bulging and rapid adaptive growth on northern side of lower stem may be indicative of an internal fault. ▪ Occasional deadwood to a maximum diameter of 100mm.	▪ Retain in context of proposed development. ▪ Protect RPA throughout development using Temporary Protective Fencing to form a CEZ.	20+	B1	342	10.44

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 exiting site and tree circumstances and conditions into account and not proposed developments. Arboricultural Impact Assessment and Method Statement related 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+)
Cat. 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

TREE SURVEY SCHEDULE FOR ARBORICULTURAL IMPACT APPRAISAL	
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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)
T7	Sycamore	7.5	210	N E S W	2 2 3 2.5	2-W 2.5	Y	G	▪ Growing on opposite side of brook. ▪ Bifurcates at a height of 1.75m. ▪ Crown biased south-west due to large neighbouring Ash tree.	▪ Retain in context of proposed development. ▪ Protect RPA throughout development using Temporary Protective Fencing to form a CEZ.	40+	C1	20	2.52
G1	2no. Pissards Plum, 1no. Beech	≤ 7	≤ 280	N E S W	≤ 3 ≤ 5 ≤ 5 ≤ 3	0.5 ≥ 1	Y-M	M-G	▪ Moderately spaced group in front garden of property. ▪ Leaf abscission has occurred early in central Plum in comparison to neighbouring Plum, with majority of crown defoliated and neighbour's still almost full. ▪ Beech has crown heavily biased south and slight stem lean south.	▪ Retain in context of proposed development. ▪ Prune crown of Beech in order to create a 2m clearance from proposed extension. ▪ Protect RPAs throughout development using Temporary Protective Fencing to form a CEZ.	10+	C1	≤ 35	≤ 3.36
G2	3no. Apple	≤ 6.5	≤ 1x180 2x160 (ms)	N E S W	≤ 2.5 ≤ 3 ≤ 3.5 ≤ 3.5	1.5-N ≥ 1	SM-M	M-G	▪ Widely spaced group in front garden of property. ▪ All have slight stem leans south and crowns biased south, away from large Ash trees to north.	▪ Retain in context of proposed development. ▪ Protect RPA throughout development using Temporary Protective Fencing to form a CEZ.	10+	C1	≤ 38	≤ 3.47
G3	2no. Common Ash	≤ 15	≤ 480#	N E S W	≤ 6 ≤ 6 ≤ 5 ≤ 6	8-E ≥ 3	EM	P	▪ Widely spaced pair growing in hedge H1 and therefore unable to inspect bases. ▪ Western tree in an advanced stage of decline, has only one leader remaining and has evidently lost other leaders and numerous primary branches in the past, and has heavy ivy to lower crown. ▪ Eastern tree in a moderate stage of decline, bifurcates at a height of 5m, where a third leader has been lost in the past, has a moderate stem lean north, towards road, widespread deadwood to a maximum diameter of 150mm, and a noticeably thinning crown. ▪ Eastern tree also has a defective union with swelling at a height of 10m with 250mm diameter secondary live branch likely to fail over road. ▪ Short projected life expectancies due to terminal state of decline.	▪ Remove due to short projected life expectancies.	<10	U	≤ 104	≤ 5.76
G4	3no. Common Ash	≤ 18	≤ 480	N E S W	≤ 6 ≤ 6 ≤ 6 ≤ 6	5-N ≥ 1.5	EM	M	▪ Located on neighbouring land and therefore not inspected in detail. ▪ Growing in neighbouring churchyard, either very close to or in contact with stone boundary wall. ▪ Central tree severely displacing boundary wall, which now bows heavily into site.	▪ Retain in context of proposed development. ▪ Protect RPA throughout development using Temporary Protective Fencing to form a CEZ.	20+	B2	≤ 104	≤ 5.76

TREE SURVEY SCHEDULE FOR ARBORICULTURAL IMPACT APPRAISAL	
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Client:	Dr T Hutchison

Surveyor:	Jennie Keighley MSc TechArborA
Survey Date:	14 September 2016
Job Ref:	BTC1186

No.	Species	Height	Stem Diam.	Branch Spread	Branch & Canopy Clearances	Life Stage	PC	General Observations and Comments	Management Recommendations	ERC	Cat. Grade	RPA (m^2)	RPA Radius (m)
G5	1no. Common Ash, 1no. Weeping Ash	≤ 18	≤ 450#	N ≤ 7 E ≤ 5 S ≤ 7 W ≤ 6	6-S ≥ 2	EM	P	▪ Growing on opposite side of brook. ▪ Common Ash is located on neighbour's side of fence. ▪ Weeping Ash has severe stem curvature west from a height of 1.5m to a height of 3m and has several tear-out wounds mid-crown where branches up to 200mm diameter have been lost. ▪ Both trees have small leaves, slight to moderate thinning of crowns, and occasional deadwood to a maximum diameter of 100mm.	▪ Retain in context of proposed development. ▪ Protect RPA throughout development using Temporary Protective Fencing to form a CEZ.	10+	C1	≤ 92	≤ 5.4
G6	Cypress, Rhododendron, Maple	≤ 9	≤ 250	N ≤ 3 E ≤ 3 S ≤ 3 W ≤ 3	0 ≥ 0	Y-SM	G	▪ Very closely spaced garden shrub bed comprising various large shrubs and small trees.	▪ Retain in context of proposed development. ▪ Protect RPA throughout development using Temporary Protective Fencing to form a CEZ.	10+	C1	≤ 28	≤ 3
H1	Holly, Hawthorn	≤ 2	≤ 75#	≤ 1.5 Wide	N/A ≥ 0	Y	G	▪ Managed boundary hedge to front of property.	▪ Retain in context of proposed development. ▪ Ensure protection throughout development.	10+	C2	N/A	≤ 0.9
H2	Leyland Cypress	≤ 2	≤ 100#	≤ 1 Wide	N/A ≥ 0.25	Y	G	▪ Managed, fragmented boundary hedge to rear of property.	▪ Retain in context of proposed development. ▪ Ensure protection throughout development.	10+	C2	N/A	≤ 1.2

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 *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.*			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), shall be enclosed by **Temporary Protective Fencing** and/or, where necessary, **Temporary Ground Protection Measures**. The fencing/ground protection Type(s), locations, and extents shall be agreed, in writing, with the Local Planning Authority (LPA). In turn, the **Temporary Protective Fencing** and/or **Temporary Ground Protection Measures** shall:

1. be constructed as in accordance with the Type 1, Type 2 or Type 3 'Temporary Protective Fencing Construction' sections and, where applicable the 'Temporary Ground Protection Measures' section, as detailed herein and agreed, in advance with the LPA;
1. be retained in place throughout the development process until completion of the project, and only removed following receipt of written permission from the LPA;
2. be sited in the area(s) defined by the Root Protection Areas on the associated Tree Impact Plan, or as the CEZs on the Tree Protection Plan;
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;
6. preclude the storage of all development related materials and substances including fuels, oils, additives, cement and/or any other deleterious substance; and
7. be affixed with a 600mm x 300mm warning sign reading "TREE PROTECTION AREA KEEP OUT" (see Figure 1, below), at every 10.0 metre length of protective fencing.

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

Figure 1: CEZ Warning Sign

– TREE PROTECTION AREA –
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:

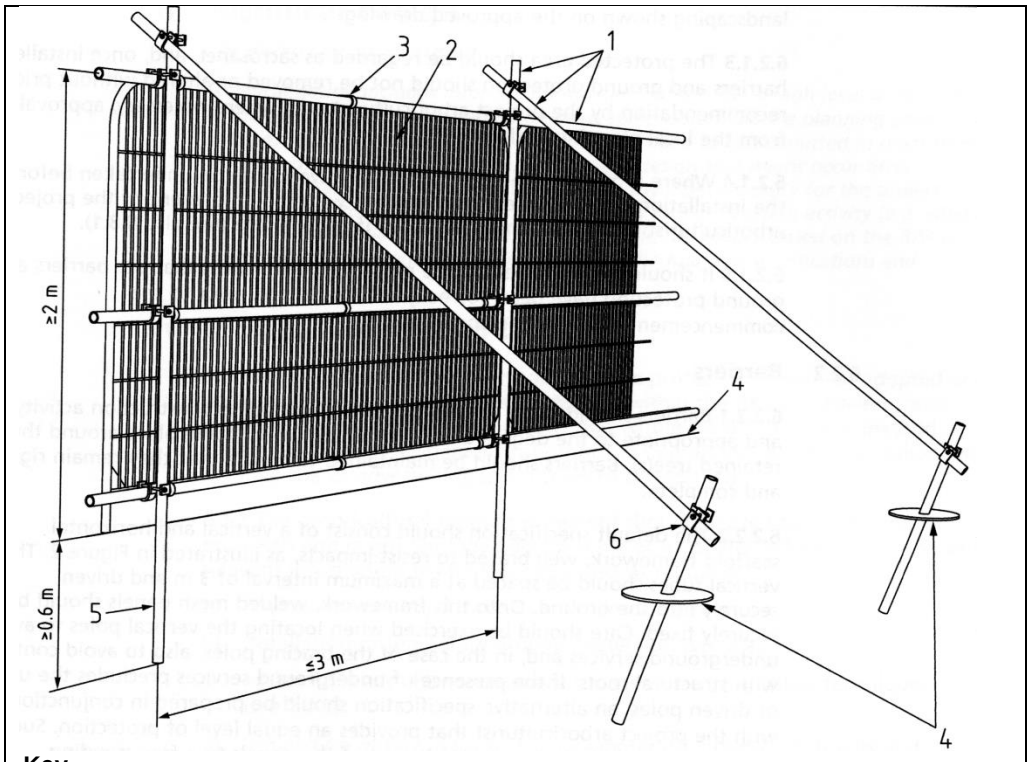
- THE PROTECTIVE FENCING MUST NOT BE MOVED
- NO PERSON SHALL ENTER THE CONSTRUCTION EXCLUSION ZONE
- NO MACHINE, PLANT OR VEHICLES SHALL ENTER THE EXCLUSION ZONE
- NO MATERIALS SHALL BE STORED IN THE EXCLUSION ZONE
- NO SPOIL SHALL BE DEPOSITED IN THE EXCLUSION ZONE
- NO EXCAVATION SHALL OCCUR IN THE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

Type 1 (i.e. 'Default') Temporary Protective Fencing Construction (see Figure 2, below)

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 points 3 to 5 of Figure 2, overleaf.
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 points 4 to 5.
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 45º 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) shall be fixed to every 10.0 metre length of protective fencing.
8. On completion of erection, and prior to any demolition or construction works, site preparation, excavation or delivery of plant and materials, the Consulting Arboriculturist or the LPA Tree Officer, as agreed, shall inspect the Temporary Protective Fencing.

Figure 2: BS5837:2012 Default specification for protective barrier



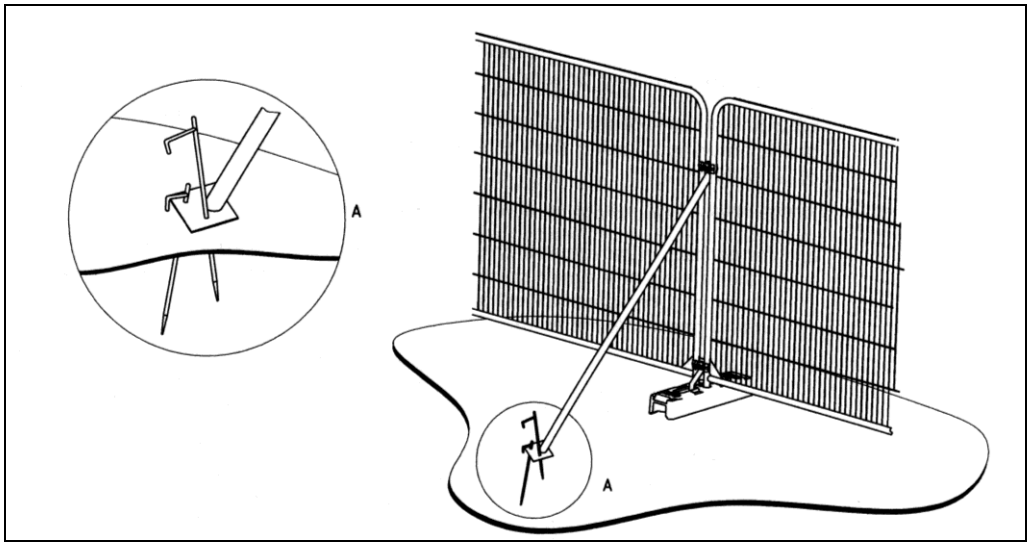
Key

1. Standard scaffold poles.
2. Heavy gauge 2 metre tall galvanised tube and welded mesh infill panels
3. Panels secured to uprights and cross members with wires ties
4. Ground level
5. Uprights driven into the ground until secure (minimum depth 0.6 metres)
6. Standard scaffold clamps

Type 2 Temporary Protective Fencing Construction (see Figure 3(a), below)

1. Temporary protective fencing panels shall be weldmesh "Heras" panels of at least 2.0 metres in height.
2. The panels shall stand on rubber or concrete feet.
3. The panels shall butt together, and be joined together using a minimum of two anti-tamper couplers, installed so that they can only be removed from inside the fence.
4. The distance between the fence couplers shall be at least 1.0 metre, and shall be uniform throughout the fence.
5. The panels shall be supported on the inner side by stabiliser struts, which shall be clamped to the scaffold framework at a 45º angle and extend back into the CEZ and shall be attached to a base plate, which shall be secured to the ground with pins (Figure 3a).
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) shall be fixed to every 10.0 metre length of protective fencing.
8. On completion of erection, and prior to any demolition or construction works, site preparation, excavation or delivery of plant and materials, the Consulting Arboriculturist or the LPA Tree Officer, as agreed, shall inspect the Temporary Protective Fencing.

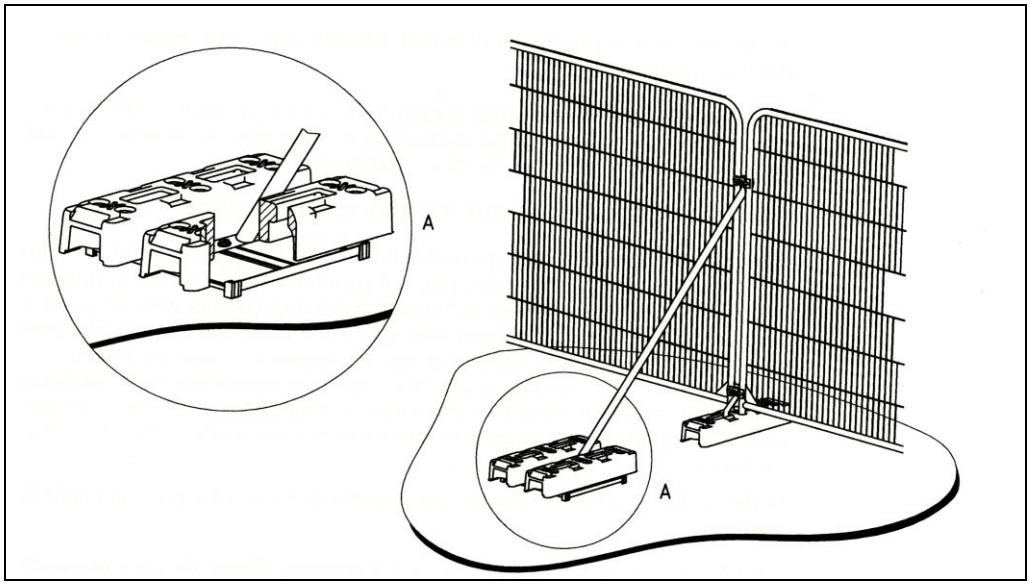
Figure 3(a): Type 2 Fencing (BS5837:2012 above-ground strut stabilising system with ground pins)



Type 3 Temporary Protective Fencing Construction (see Figure 3(b), overleaf)

1. Temporary protective fencing panels shall be weldmesh "Heras" panels of at least 2.0 metres in height.
2. The panels shall stand on rubber or concrete feet.
3. The panels shall butt together, and be joined together using a minimum of two anti-tamper couplers, installed so that they can only be removed from inside the fence.
4. The distance between the fence couplers shall be at least 1.0 metre, and shall be uniform throughout the fence.
5. The panels shall be supported on the inner side by stabiliser struts, which shall be clamped to the scaffold framework at a 45º angle and extend back into the CEZ and shall be attached to a block tray base (Figure 3b).
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) shall be fixed to every 10.0 metre length of protective fencing.
8. On completion of erection, and prior to any demolition or construction works, site preparation, excavation or delivery of plant and materials, the Consulting Arboriculturist or the LPA Tree Officer, as agreed, shall inspect the Temporary Protective Fencing.

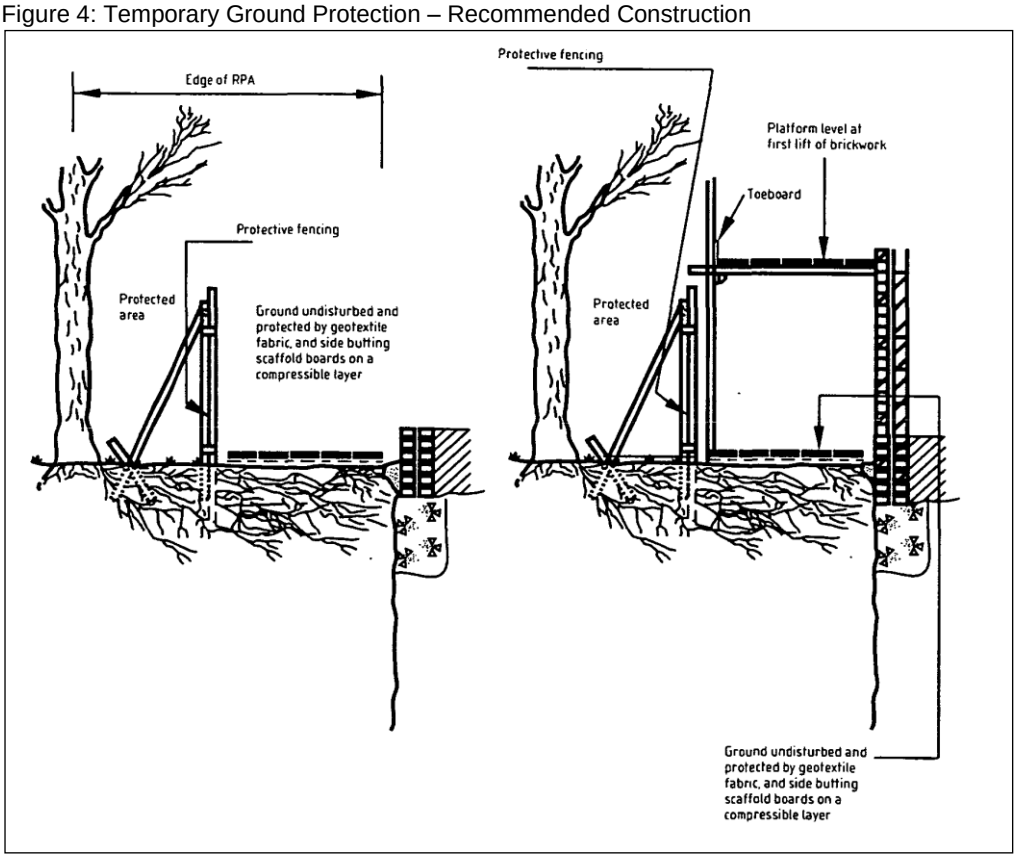
Figure 3(b): Type 3 Fencing (BS5837:2012 above-ground stabilising system with strut on block tray)



Temporary Ground Protection

2. Any necessary Temporary Ground Protection areas shall conform to Figure 4, below, unless otherwise agreed with the LPA.
3. 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.
4. Side-butting scaffold boards shall then be fitted to cover the Ground Protection Area.
5. On completion of installation, and prior to any demolition or construction works, site preparation, excavation or delivery of plant and materials, the Consulting Arboriculturist or the LPA Tree Officer, as agreed, shall inspect the Temporary Ground Protection.
6. The Temporary Ground Protection shall remain in place until completion of the project and only removed following receipt of written permission from the LPA.

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 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 1: Locations of trees were not included on the OS site plan, and their stems were subsequently plotted by the arboricultural surveyor at the time of the survey using GPS siting and measurement from site features where possible. As such, the plotted locations of these trees cannot therefore be considered to be wholly accurate.

Note 2: Trees with their identification numbers labelled in grey are recommended for removal in the context of the development.

Root Protection Areas (RPAs):

RPAs
Ground Areas around Retained Trees that Should be Protected Throughout Development Works with Protective Fencing to form a Construction Exclusion Zone - see Below

Construction Exclusion Zones (CEZs):

CEZs
Ground Areas around Retained Trees that are to be Enclosed with Temporary Fencing Throughout Development Works - see Temporary Protective Fencing Specification

Project:
CIBOLA
PENDLETON
CLITHEROE
LANCASHIRE
BB7 1PT

Client:
MR T HUTCHISON

Title:
TREE PROTECTION PLAN
in Relation to Proposed Extension to Dwelling and Roof Reconstruction

Scale:	1:500@A4
Date:	September 2016
Drawn by:	JK
Checked by:	PH

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Ref: BTC1186-TPP Rev: