Arboricultural Impact Assessment

in Relation to Proposed Single-Storey 'Sun-Room' Extension at

The Beeches, Waddington Road, Clitheroe, Lancashire, BB7 2HN

Prepared by:

Bowland Tree Consultancy Ltd

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ARBORICULTURAL IMPACT ASSESSMENT OVERVIEW	
Site:	The Beeches, Waddington Road, Clitheroe, Lancashire, BB7 2HN
Proposal:	Construction of single-storey sun-room on pile and beam foundation
Survey Date:	8 July 2016
Report Date:	15 July 2016
Prepared By:	Phill Harris MSc BSc(Hons) HND MArborA CEnv MICFor
Report Ref:	BTC1141
Agent for Clients:	Jeff Marshall Associates

Introduction and Rationale. Bowland Tree Consultancy Ltd was instructed to carry out an appraisal of the potential for the construction of a proposed single-storey sun-room extension 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 8 July 2016 and carried out a tree survey 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) showing the site under consideration with pertinent tree constraints detailed, and an approximation of the location of the proposed extension, along with any other pertinent information. The TIP is based on a scaled existing ordinance survey (OS) produced site plan, and, for the purpose of this report, I presume the details of the plan supplied to be accurate.

The Site and the Proposal. The site under consideration is located off Waddington Road, close to the northern edge of the town of Clitheroe, within the administrational boundaries of Ribble Valley Borough Council (RVBC).

It currently consists of a semi-detached two-storey brick-built residential property, with gardens to its south and west (see TIP). The property is bordered to the north-east by a cemetery, to the north-east by the neighbouring property and garden, to the south-east by an allotment garden, and south south-west by Waddington Road. There is an area of asphalt hard-standing around the southern and eastern areas of the property. Topography within the site varies slightly between the area of asphalt around the property and the garden, with a slight fall in ground levels down to the garden area (see Fig. 1, below).

Fig 1: The south-eastern elevation of the property, with tree T1 just right of centre

I am informed, by the agent, Jeff Marshall, that the proposal is for the construction of a single-storey sun-room extension to the south-eastern side of the existing property (see TIP), within the existing raised hard-surfaced

area.

The Trees. Three individual trees (prefixed 'T') were surveyed at the site under consideration, and the constraints of these trees are plotted on the appended TIP. The trees, which are a Copper Beech, a Common Beech and a Cut-Leaf Beech, are in the mature to post-mature age-range and stand at heights of up to approximately 18 metres, maximum diametrical crown spreads of up to 17.5 metres, and stem diameter of up to 970 millimetres. The trees' dimensions, along with any other pertinent information such as structural defects and physiological deficiencies, and recommendations for remedial management works, are included in the TSS attached.

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). 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. In this respect, I am informed, by the clients, Mr and Mrs Hind, that the surveyed trees are not afforded protection by a TPO, and that the property is not located within the perimeters of a Conservation Area.

The trees were appraised in accordance with BS5837:2012 Table 1 (as appended) and, as detailed in Table A, overleaf, one tree was allocated a high retention value of 'A', one tree was allocated a moderate retention value of 'B', and one tree is recommended for removal regardless of the proposed development due to significant structural defects and a resultant high risk of failure. 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'**	T1	*1 Tree*
Those of a moderate quality that should be afforded appropriate consideration in the context of development	**'B'**	T2	*1 Tree*
Those of a low quality that should be afforded appropriate consideration in the context of development	**'C'**	-	-
Those considered unsuitable for retention	**'U'**	T3	*1 Tree*
			= 3 Trees in Total

The Proposal's Projected Impacts on Trees. From the information provided by the agent to date, it is projected that, as detailed in Table B below, the proposed extension can be constructed whilst retaining both the moderate and high quality surveyed trees, providing that the design and construction is in strict accordance with BS5837:2012, as per the details given in 'Special Materials and Working Methods for Proposed Construction within RPAs', below.

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'**	T1	-	*1 Tree*
Totals		*1 Tree*	-	***= 1 Tree in Total***

Special Materials and Working Methods for Proposed Construction within RPAs. As indicated on the TIP, the proposed extension encroaches approximately 6.5% into of the total Root Protection Area (RPA) of tree T1. Nonetheless, I would note that section 7.5 of BS5837:2012 states that *"The insertion of specially engineered structures within RPAs may be justified if this enables the retention of a good quality tree that would otherwise be lost (usually categories A or B)",* and that *"Root damage can be minimized by using:*

- *piles, with site investigation used to determine their optimal location whilst avoiding damage to roots important for the stability of the tree, by means of hand tools or compressed air soil displacement, to a minimum depth of 600 mm; and*

- *beams, laid at or above ground level, and cantilevered as necessary to avoid tree roots identified by site investigation."*

In consideration of the above it is therefore evident that, in order to construct the extension in the location proposed (i.e. within the RPA of tree T1), it will be necessary for it to be built using a pile and beam foundation system, with the beam set at or above current ground levels and a void between the underside of the structure's floor and the existing ground. In turn, the delivery of such a design can be secured by the Local Planning Authority (LPA) through the imposition of a suitably worded condition, attached to a planning approval, requiring the provision of a detailed specification drawing for the foundation, prepared in accordance with section 7.5 of BS5837:2012.

Nonetheless, in order to assess the viability of the design, and to achieve the actual construction, it will be necessary to first carry out hand tool only excavation works to remove the existing asphalt hard-surface in order to reveal the soft sub-surface onto which the beam can be constructed, and to subsequently carry out compressed air soil displacement works of the proposed pile locations in order to assess for the presence of tree roots. Specific details regarding the timing, procedures, working special methods, arboricultural monitoring, and protective measures to be used in relation to the construction of the pile and beam foundation should be itemised in an Arboricultural Method Statement and on a Tree Protection Plan, the provision of which can also be conditioned to a planning approval.

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 development through the installation of temporary protective fencing to form a Construction Exclusion Zone, or through the use of temporary ground protection where fencing is not possible, to prevent damage to roots from soil compaction. 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 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.

Specific details regarding the Temporary Protective Fencing and Ground Protection should be included in the Arboricultural Method Statement and on the Tree Protection Plan. Essentially, these documents describe the positioning, 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.

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 be followed accordingly.

Summary and Conclusions. The construction of a single-storey sun-room extension to the south-eastern side of the existing property is proposed at the site under consideration.

Three individual trees were surveyed in respect of the proposals and their associated potential to impact upon said vegetation. Respectively, there trees were allocated a high retention value, a moderate retention value, and to be unsuitable for retention, with the latter being recommended for removal as soon as is practicable for risk management reasons.

From the information provided, my appraisal determined that construction of the extension can be achieved whilst retaining both the high and the moderate quality tree, in accordance with BS5837:2012, providing that special materials and working methods are employed and strictly adhered to.

In this respect the use of a pile and raised beam foundation with a void below floor level is essential, and the delivery of such a design can be secured by the LPA through the imposition of a suitably worded condition, attached to a planning approval.

In turn, the provision of and adherence to an Arboricultural Method Statement and a Tree Protection Plan, detailing the procedures, working methods, monitoring, and protective measures required in order to adequately protect the retained tree throughout the development, can also be secured by planning condition.

Phill Harris MSc BSc (Hons) HND CEnv MArborA MICFor
Chartered 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			
Site:	The Beeches, Waddington Road, Clitheroe, Lancashire, BB7 2HN	**Job Ref:**	BTC1141
Agent for Client:	Jeff Marshall & Associates		

Surveyor:	Phill Harris – Chartered Arboriculturist
Survey Date:	8 July 2016

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	Cut-Leaf Beech	17	830	N E S W	9 8.5 8 9	6 4	M	G	▪ Number of large occluded pruning wounds to lower stem. ▪ Branch extremities in contact with roof of property.	▪ Retain in context of proposed development. ▪ Construct proposed extension using raised beam on pile foundation, in accordance with section 7.5 of BS5837:2012. ▪ Protect Root Protection Area (RPA) throughout development using Temporary Ground Protection and Temporary Protective Fencing, as indicated in Specification. ▪ Prune to obtain a 1m clearance from roof.	40+	A1/2	312	9.96
T2	Common Beech	18	1x900 2x750 (ms)	N E S W	8.5 8.5 8.5 8.5	7-W 5	PM	P	▪ Stem bifurcates at a height of approximately 1m with acute included bark unions. ▪ Large number of both juvenile and mature *Ganoderma* sp. fungal fruiting bodies to stems. ▪ Dense ivy to largest diameter stem. ▪ Juvenile and mature *Kretzschmaria deusta* fungal fruiting bodies to 200mm diameter wound on lower stem. ▪ Has sustained failure of fourth sub-stem, to south, with associated cavity and extensive decay. ▪ High risk of failure due to projected extent of decay.	▪ Remove due to high risk of failure and subsequent impact with road.	<10	U	707	15
T3	Copper Beech	16.5	970	N E S W	6.5 8 7 5.5	3 3	M	G	▪ Stem trifurcates at a height of approximately 3m with tight forks. ▪ Several large partially occluded pruning wounds to stem below trifurcation point, with no signs of progressive decay within wounds. ▪ 350mm diameter primary branch in north side of crown, over garden, has a 200mm diameter cavity to with bifurcation immediately above it.	▪ Retain in context of proposed development. ▪ Protect RPA throughout development using Temporary Ground Protection and Temporary Protective Fencing, as indicated in Specification. ▪ Carry out climbing inspection to assess 200mm diameter cavity to primary branch over garden in order to appraise structural stability at this point.	20+	B1/1	426	11.64

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

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), 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 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, 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!

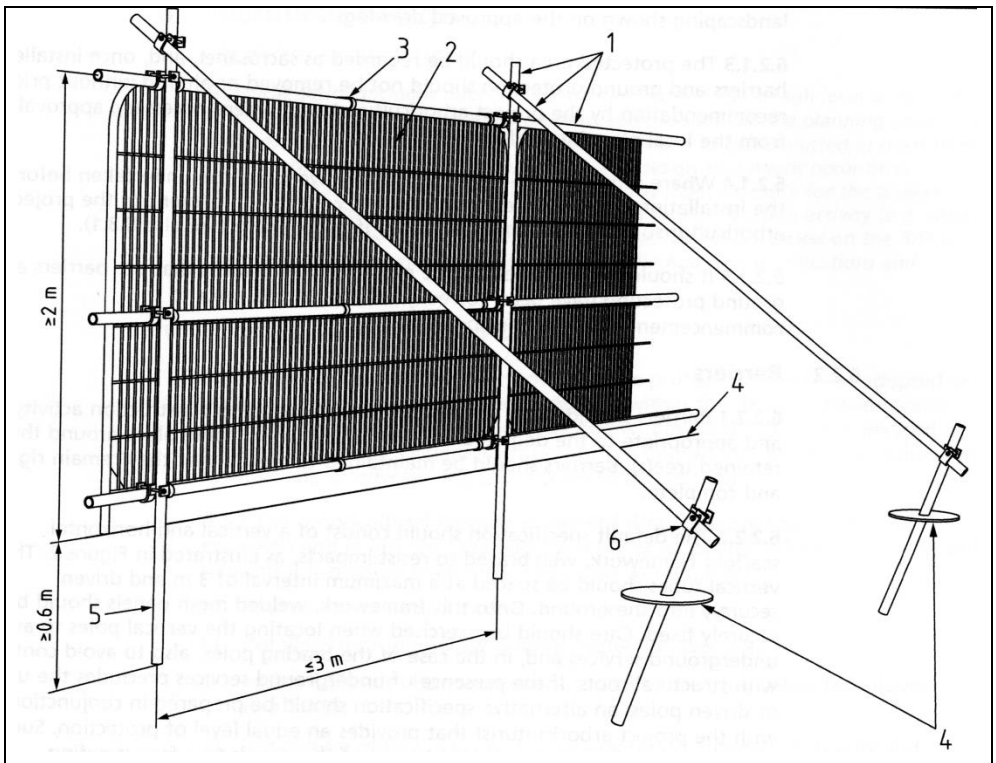
(TOWN & COUNTRY PLANNING ACT 1990)
THE TREES ENCLOSED BY THIS FENCE ARE PROTECTED BY PLANNING CONDITIONS AND/OR SUBJECTS OF A 'TREE PRESERVATION ORDER', THE CONTRAVENTION OF WHICH MAY LEAD TO CRIMINAL PROSECUTION

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

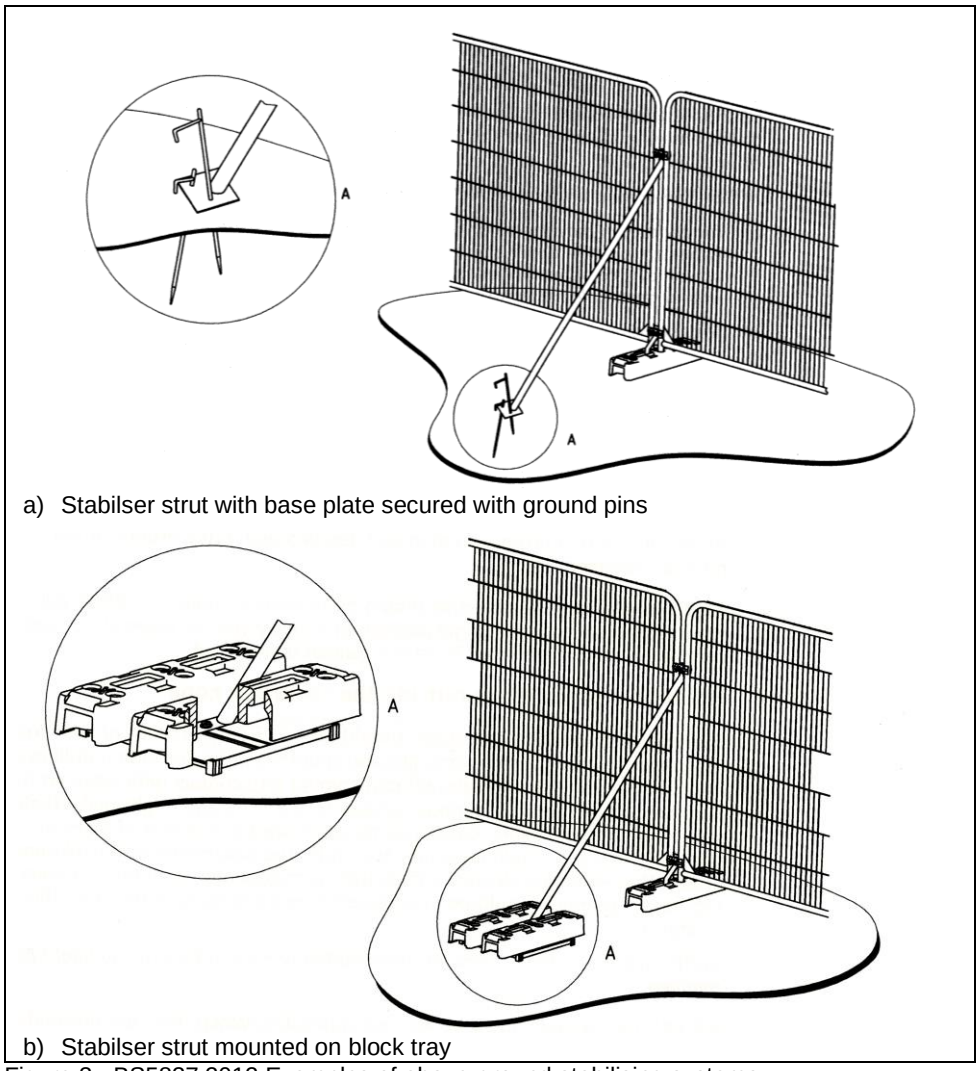
Figure 1: CEZ Warning Sign



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

Figure 2: BS5837:2012 Default specification for protective barrier



a) Stabilser strut with base plate secured with ground pins

b) Stabilser strut mounted on block tray

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

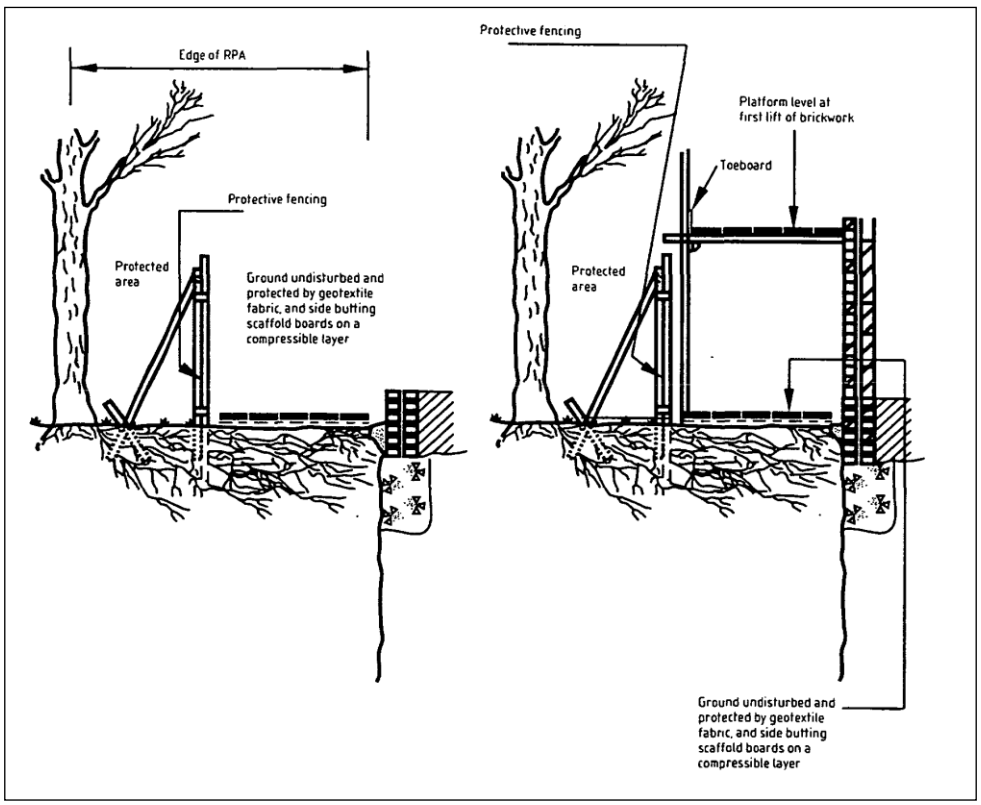
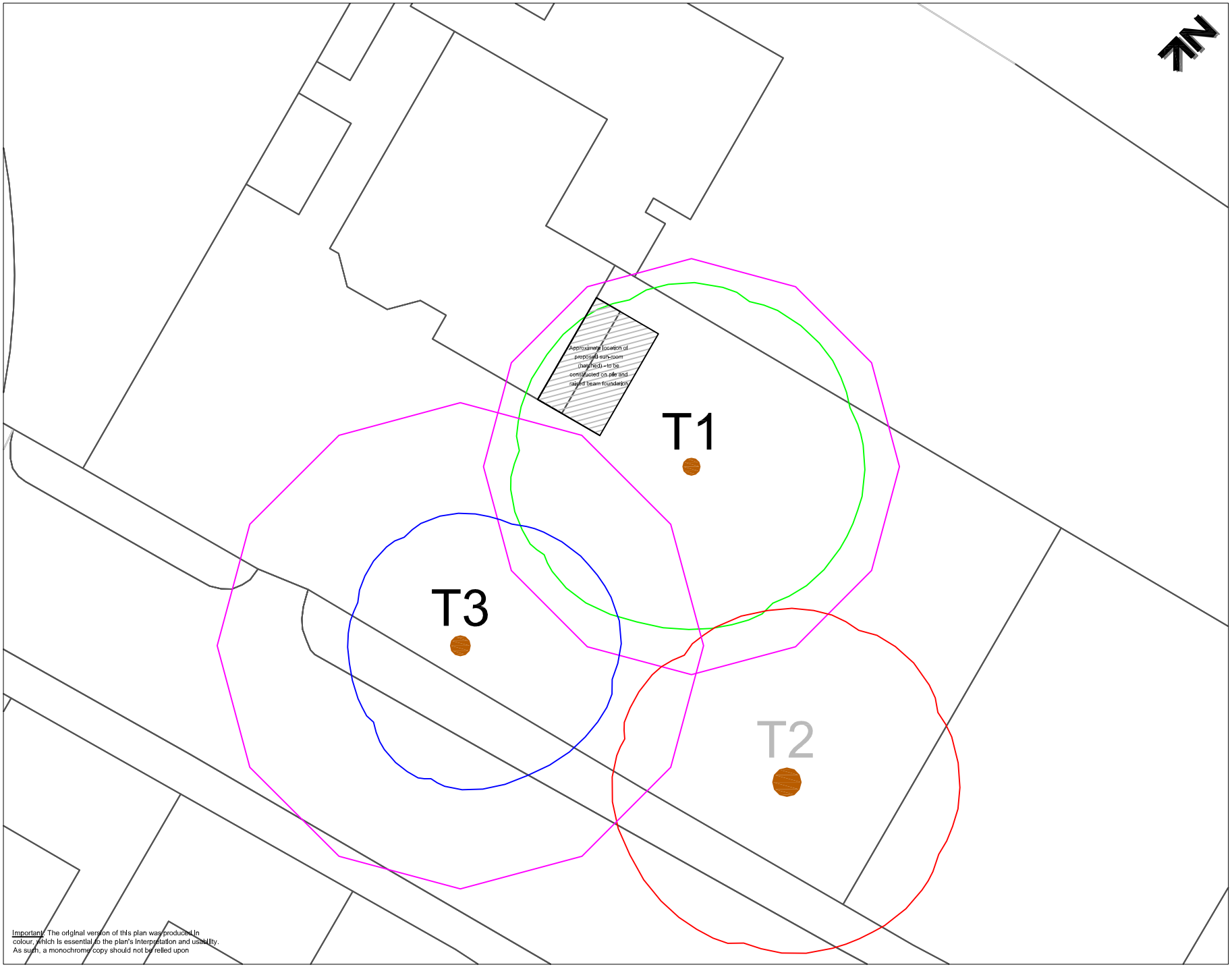


Figure 4: Temporary Ground Protection – Recommended Construction



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

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
Those of a High Quality with an Estimated Remaining Life Expectancy of at Least 40 Years

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

Category 'C' Tree
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
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: The locations of the trees were not included on the OS site plan provided, and their locations 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 the trees cannot therefore be considered to be wholly accurate
Note 2: Trees with their numbers detailed in grey are recommended for removal regardless of the site proposals

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 Protection Specification

Project:
THE BEECHES
WADDINGTON ROAD
CLITHEROE
LANCASHIRE
BB7 2HN

Agent for Client:
JEFF MARSHALL & ASSOCIATES

Title:
TREE IMPACT PLAN
In Relation to Proposed Construction of Single-Storey 'Sun-Room' Extension

Scale:	1:250@A4
Date:	July 2016
Drawn by:	PH
Checked by:	JK

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Ref: BTC1141-TIP Rev: