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Arboricultural Impact Assessment

**In Relation to Proposed Construction of
3no. Residential Units at**



**Thorn Cottage, 12 Knowsley Road,
Wilpshire, Lancashire, BB1 9PX**

Prepared by:

Bowland 
Tree Consultancy Ltd

March 2015

ARBORICULTURAL IMPACT ASSESSMENT THORN COTTAGE, WILPSHIRE

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ARBORICULTURAL IMPACT ASSESSMENT	
Site:	Thorn Cottage, 12 Knowsley Road, Wilpshire, Lancashire, BB1 9PX
Proposal:	3 Unit Residential Development
Survey Date:	26 February 2015
Report Date:	17 March 2015
Prepared By:	Phill Harris
Report Ref:	BTC819
Agent for Client:	Sunderland Peacock & Associates Ltd

Introduction and Rationale. Bowland Tree Consultancy Ltd was instructed to carry out an appraisal of the potential for a proposed development 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 26 February and 17 March 2015 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, a Tree Constraints Plan (TCP) showing the site under consideration with pertinent tree constraints detailed, and a Tree Impact Plan (TIP) which also has overlay of the development proposal and any associated projected tree related impacts. The TCP and TIP are based on a topographical plan and site proposal plan, as supplied by the project agents, Sunderland Peacock & Associates Ltd, and, for the purpose of this report, I presume the details of the plans to be accurate.

The Site and the Development Proposal. The site under consideration is located to the south of the village of Wilpshire, Lancashire, on the northern outskirts of the town of Blackburn. It stands 11.3 kilometres to the south-west of the administrative town of Clitheroe, within the boundaries of Ribble Valley Borough Council.

The site, which is roughly L-shaped, is located on a gated access track off Knowsley Road, to the west of the A666, and is bordered by residential properties to the north and part of the east, a small area of woodland and a railway embankment to the remainder of the east, residential properties to the south, and a stream to the west.

It currently consists of a detached two-storey cottage/workshop to the north with associated gardens, and areas of compacted ground and asphalt and concrete hard-standing with several garage buildings of various sizes to the south and south-east. There is a single existing vehicular access point off Knowsley Road to the north-west. Topography within the site is variable, with a steady rise of several metres from west to east, and a more pronounced incline up the railway banking close to the eastern boundary.

I am informed that the proposal is to demolish the existing buildings and, in turn, to construct three detached residential properties, of which the one to the east has a detached garage. Access is proposed from the existing point off Knowsley Road to the site's north-west.

The Trees. Six individual trees (prefixed 'T'), one group 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.

I have not been informed if any of the surveyed trees are the subject of a Tree Preservation Order (TPO), or if the site is within a Conservation Area. As such, it is therefore essential to contact the planning office at Ribble Valley Borough Council in order to check for the presence of any such statutory tree protection prior to carrying out any tree works that are not related directly to the implementation of a detailed planning approval.

The surveyed trees are in the young to mature age range and stand at heights of up to approximately 21 metres, have maximum diametrical crown spreads of up to approximately 19 metres and stem diameters of up to approximately 600 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.

I understand that, from the red-line boundary plan provided by the project agents, Sunderland Peacock & Associates Ltd, all the trees included in this appraisal, except T5 which is located on neighbouring land to the south-west, are under the ownership of the client. However, in this respect I would highlight the fact that low value 'C' category trees T3 and T4 currently stand to the opposite side a post and panel fence to a neighbouring residential property. From the information provided it would be reasonable to conclude that the fence encroaches into the red-line ownership boundary and, considering the red-line boundary to be accurate, that the two trees under consideration are located within the ownership of the client.

The trees were appraised in accordance with BS5837:2012 Table 1 (appended) and, as detailed in Table A, below, one individual tree was allocated a high retention value of 'A', four individual trees, one group, and three hedges were allocated a low retention value of 'C', and one tree was classed as unsuitable for retention. 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'	-	-
Those of a low quality that should be afforded appropriate consideration in the context of development	'C'	T3, T4, T5, T6, G1, H1, H2, H3	4 Trees 1 Group 3 Hedges
Those considered unsuitable for retention	'U'	T2	1 Tree
			= 6 Trees, 1 Group & 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 two low quality 'C' category trees and two very short lengths of low quality hedge. However, I would emphasise that the trees that require removal are small and are located internal to the site and therefore confer a very low visual amenity in the local landscape.

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

	Ret. Cats.	Removals necessary to implement development	Removals suggested for non-development related reasons	Total 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'	T3, T4, H1, H3	-	2 Trees 2 Hedges
Those that should be removed for sound management reasons regardless of site plans	'U'	-	T2	1 Tree
Totals		2 Trees 2 Hedges	1 Tree	= 3 Trees & 2 Hedges in total

Mitigation for Projected Tree Losses. The site has sufficient space for the inclusion of new tree planting as part of a landscape scheme. In turn therefore, it is projected that a high quality landscape scheme, with the inclusion of trees of suitable species for the selected locations, will sufficiently mitigate for the necessary tree losses and, in turn, deliver a more sustainable long-term visual amenity than the existing tree cover. In this respect, the provision of specific tree species, numbers, planting locations and post-planting management, in the form of a landscape plan, can be conditioned to a planning approval.

Special Working Methods for Operations within RPAs. As detailed on the TCP there is an existing garage building within the RPA of high quality 'A' category Sycamore tree T1, which is to be removed as part of the proposals. This will require prudent working methods to include the careful demolition of the building (e.g. by hand or, if using plant, by utilising the 'top down pull back' method), and the careful removal of the concrete slab that it is founded upon, along with the subsequent ground works in this area.

The working methods and procedures associated with these operations should therefore be detailed in an Arboricultural Method Statement and on a Tree Protection Plan, the provision of which can 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. 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. 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.

In respect of the protection of the retained trees BS5837:2012 recommends that, where considered expedient, as in the case of the special working methods and procedures detailed above, an Arboricultural Method Statement and Tree Protection Plan detailing special mitigation construction, such as the 'Special Working Methods for Operations within RPAs', should be prepared.

Essentially, the Arboricultural Method Statement and Tree Protection Plan describe the procedures, working methods and protective measures to be used in relation to retained trees in order to ensure that they are adequately protected during the construction process. The production of and adherence to an Arboricultural Method Statement and Tree Protection Plan should be conditioned as part of a planning approval.

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

Summary and Conclusions. The construction of a three unit residential development is proposed at the site under consideration. As such, six individual trees, one group of trees, and three hedges were surveyed in respect of the proposals and their associated potential to impact upon said vegetation. One tree has a high retention value, four trees, one group, and three hedges have low retention values, and one tree is considered unsuitable for retention.

From the information provided my appraisal determined that, in addition to the removal of the 'U' category tree, construction of the development will require the removal of two low value trees and two short sections of low value hedge. However, as both the trees are small, have been very heavily topped, and are located internal to the site where they offer a very low visual amenity value in the local landscape it would therefore be reasonable to conclude that they should not therefore be considered a constraint to development.

Nonetheless, it is anticipated that the site can accommodate a number of newly planted trees of suitable species, the provision of which can be conditioned to a planning approval. In turn, high quality new tree planting is projected to adequately mitigate for the necessary development related tree losses and deliver a more sustainable long-term visual amenity.

In addition, my appraisal determined that the high quality tree T1, can be retained and protected in the context of the proposed development whereby it will continue to contribute to the visual facets of the local landscape, but that it will be necessary to employ carefully planned and executed demolition and ground work methods within its RPA.

As such, we therefore recommend that the production of and the adherence to an Arboricultural Method Statement and a Tree Protection Plan be conditioned to a planning approval in order to ensure that suitable procedures, working methods and protective measures are correctly considered and implemented, and that the retained trees are adequately protected throughout the development.

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, BS4428:1989 - Code of Practice for General Landscape Operations, BS3936-1:1992, Nursery Stock – Part 1: Specification for Trees and Shrubs and BS4043:1989, Transplanting Root-Balled Trees, where applicable.

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

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.

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TREE SURVEY SCHEDULE & BS5837:2012 'TABLE 1'

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)
T1	Sycamore	21	3x600 1x350 1x200 (ms)	N 9.5 E 9.5 S 9.5 W 9.5	4-W 4	M	G	<ul style="list-style-type: none"> Very dense ivy up stem into branches. Stem divides into multiple sub stems at a height of approximately 0.5m, with possibility of included bark unions. Garage located within tree's Root Protection Area (RPA). 	<ul style="list-style-type: none"> Retain in context of proposed development. Sever ivy. Ensure garage, and associated slab, is removed whilst providing sufficient protection to tree's RPA, stem and branch system by way of adherence to a site specific Arboricultural Method Statement 	40+	A1/2	562	13.38
T2	Beech	9	1x400 1x300 1x200 (ms)	N 1 E 3 S 5 W 3	N/A 3	SM	M	<ul style="list-style-type: none"> Three stems arise at ground level. Stems almost in contact with neighbouring garage wall. Very heavily topped. Will cause structural displacement to neighbouring garage on incremental stem growth. 	<ul style="list-style-type: none"> Remove due to projected structural damage to third-party owned garage. 	<10	U	131	6.46
T3	Beech	7	330#	N 1.5 E 1 S 1 W 1.5	N/A 3	SM	G	<ul style="list-style-type: none"> Located within site's redline boundary on plans provided, but stands within fenced area that evidently forms part of neighbouring garden. Not inspected. Very heavily topped retaining only small percentage of branch system. 	<ul style="list-style-type: none"> Resolve boundary/fence line ambiguity issue. Remove due to low value resultant of past poor management. 	10+	C1	49	3.96
T4	Beech	6.5	300#	N 2 E 2 S 2 W 2	N/A 3	SM	G	<ul style="list-style-type: none"> Located within site's redline boundary on plans provided, but stands within fenced area that evidently forms part of neighbouring garden. Not inspected. Very heavily topped retaining only small percentage of branch system. 	<ul style="list-style-type: none"> Resolve boundary/fence line ambiguity issue. Remove in order to construct development as proposed. 	10+	C1	41	3.6
T5	Sycamore	16	1x600 1x400 (ms)#	N 6.5 E 4 S 6 W 6	6-S 5	EM	G	<ul style="list-style-type: none"> Located in neighbouring land and therefore not inspected. On opposite side of stream to site, with RPA subsequently amended in shape to take this into account. Sub-stem arises low on east side of main stem. Very dense ivy up stems. 	<ul style="list-style-type: none"> Recommend owner to sever ivy in order to facilitate future inspections. 	10+	C1	235	8.65

Headlines 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 60% 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: Estimated 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. La = Dead, MD = Moderately, 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 Contradictions 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: Estimated Remaining Contribution - In years as per BS5837:2012 Table 1
RPA m²: Category Grading - tree retention value based on 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 to 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 banded 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 'Y' symbol

TREE SURVEY SCHEDULE FOR ARBORICULTURAL IMPACT APPRAISAL

Site: Thorn Cottage, 12 Knowsley Road, Wilpshire, Lancashire, BB1 9PX

Agent for Client: Sunderland Peacock & Associates Ltd

Surveyor: Phill Harris

Survey Date: 26 February 2015

Job Reference: BTC819

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No.	Species	Height	Stem Diam.	Branch Spread	Branch & Canopy Clearance	Life Stage	PC	General Observations and Comments	Management Recommendations	ERC	Cat. Grade	RPA (m ²)	RPA Radius (m)
T6	Irish Yew	3.5	6x40 (ms)	N 1 E 1 S 1 W 1	N/A 0	Y	G	<ul style="list-style-type: none"> Multi-stemmed from ground level. Stems in contact with boundary panel fence. 	<ul style="list-style-type: none"> Retain in context of proposed development. Protect RPA throughout demolition and construction works. 	10+	C1	4	1.18
G1	Juniper	≤ 5	≤ 100	N ≤ 1 E ≤ 1 S ≤ 1 W ≤ 1	N/A ≥ 0	Y	G	<ul style="list-style-type: none"> Very closely spaced group on top of wall. 	<ul style="list-style-type: none"> Retain in context of proposed development. 	10+	C1	≤ 5	≤ 1.2
H1	Beech	≤ 3	≤ 120	≤ 1 wide	N/A N/A	Y	G	<ul style="list-style-type: none"> Linear group forming short length of hedge. 	<ul style="list-style-type: none"> Remove in order to construct development as proposed. 	10+	C1	N/A	≤ 1.44
H2	Cherry Laurel, Privet, Spotted Laurel	≤ 2	N/A	≤ 1 wide	N/A N/A	Y	G	<ul style="list-style-type: none"> Short length of managed boundary hedge. 	<ul style="list-style-type: none"> Retain in context of proposed development. Protect hedge, as far as is practicable, throughout demolition and construction works. 	10+	C1	N/A	≤ 1
H3	Privet	≤ 1	N/A	≤ 1 wide	N/A N/A	Y	G	<ul style="list-style-type: none"> Very short length of managed hedge. 	<ul style="list-style-type: none"> Remove in order to construct development as proposed. 	10+	C1	N/A	≤ 1

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	<ul style="list-style-type: none"> Trees that have a serious, irreparable, 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 <p><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></p>	Red
Trees to be considered for retention		
	<div>1</div> <div>2</div> <div>3</div>	<div>Mainly arboricultural qualities</div> <div>Mainly landscape qualities</div> <div>Mainly cultural values, including conservation</div>
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
Category B Trees of moderate quality with an estimated remaining life expectancy of at least 20 years	Trees that might be included in category A, but are downgraded because of impaired condition (e.g. presence of significant though remediable defects, including unsympathetic past management and storm damage), such that they are unlikely to be suitable for retention for beyond 40 years; or trees lacking the special quality necessary to merit the category A designation	Trees present in numbers, usually as groups or woodlands, such that they attract a higher collective rating than they might as individuals; or trees occurring as collectives but situated so as to make little visual contribution to the wider locality
Category C Trees of low quality with an estimated remaining life expectancy of at least 10 years, or young trees with a stem diameter below 150 mm	Unremarkable trees of very limited merit or such impaired condition that they do not qualify in higher categories	Trees with no material conservation or other cultural value

- TEMPORARY PROTECTIVE FENCING SPECIFICATION -

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

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

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

Temporary Protective Fencing Construction

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

Figure 1: CEZ Warning Sign

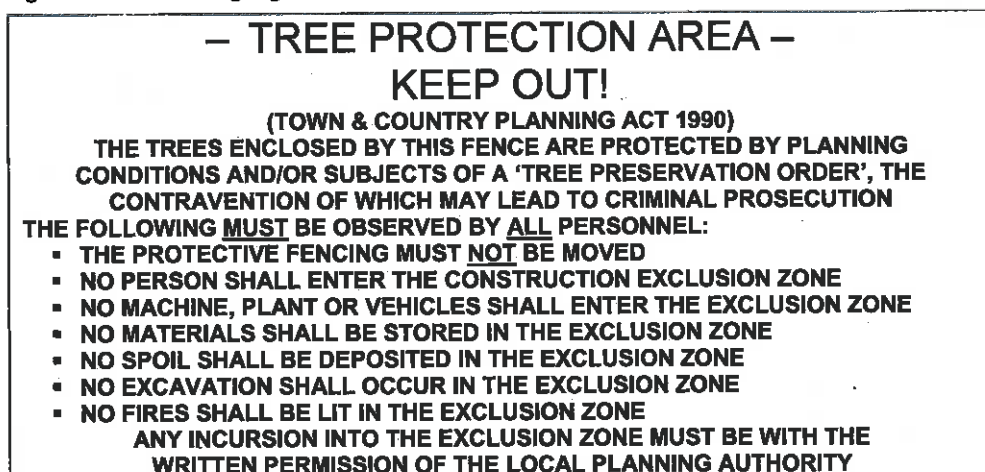


Figure 2: BS5837:2012 Default specification for protective barrier

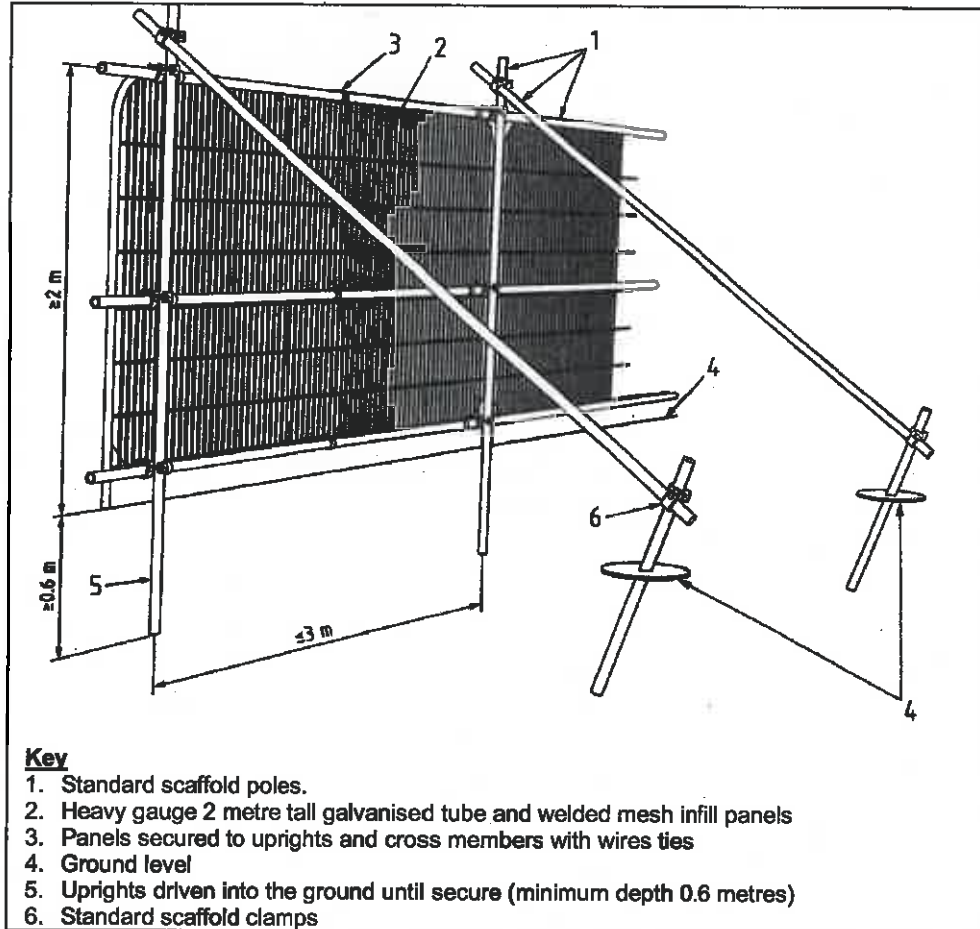
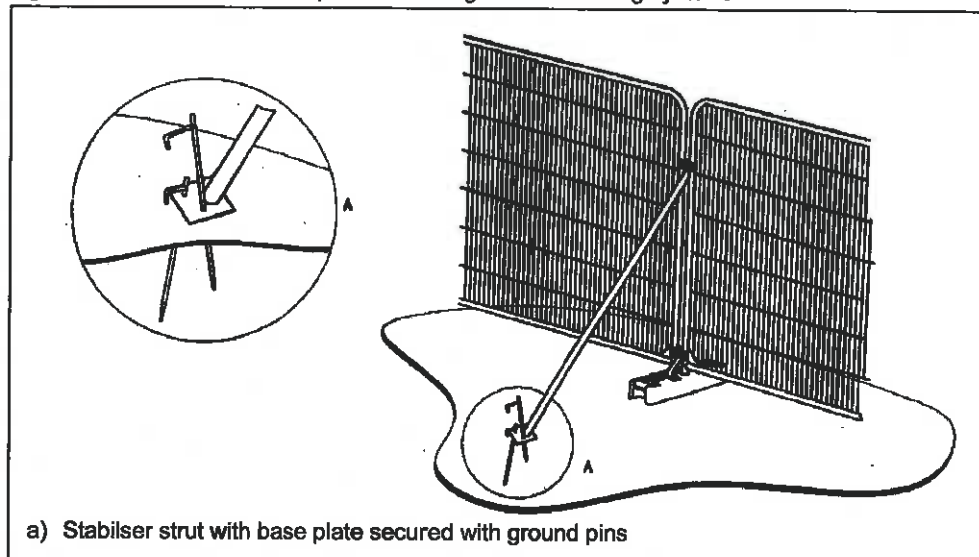
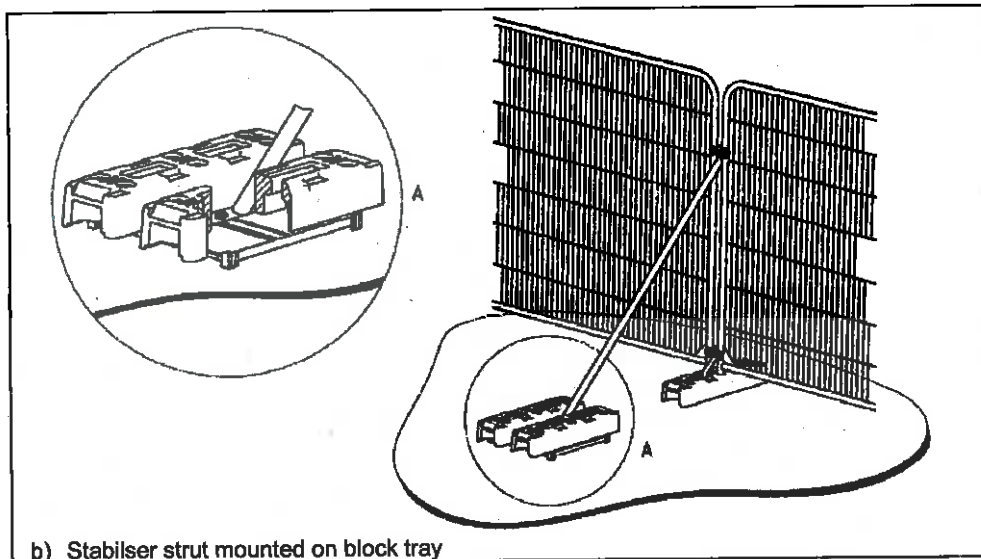


Figure 3: BS5837:2012 Examples of above-ground stabilising systems





b) Stabiliser strut mounted on block tray

KEY

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

Please refer to schedule 'Tree Survey Schedule for specific details in respect of trees within the site.

Tree Categories:

Those to be Considered for Retention:

Category 'A' Tree/Group/Hedge
Those of High Quality and/or
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 of Very Low Quality and/or
Remaining Life Expectancy of Less Than 10
Years

Note: The location of the trees T1 and T2, and the groups
and hedges, were not indicated on the topographical site plan
submitted as part of the planning application. The location of
these features was determined by a site visit on 14th February 2015.
As such, the above information is based on a visual inspection
and should be considered to be a best estimate.

Root Protection Areas (RPAs)

RPAs
Areas of Ground Around Trees that should
be Protected Through Development
to Prevent Root Damage and the Subsequent
Decline or Death of the Tree.

Project:
THORN COTTAGE
12 KNOWSLEY ROAD
WILPSHIRE
LANCASHIRE
BB1 9PX

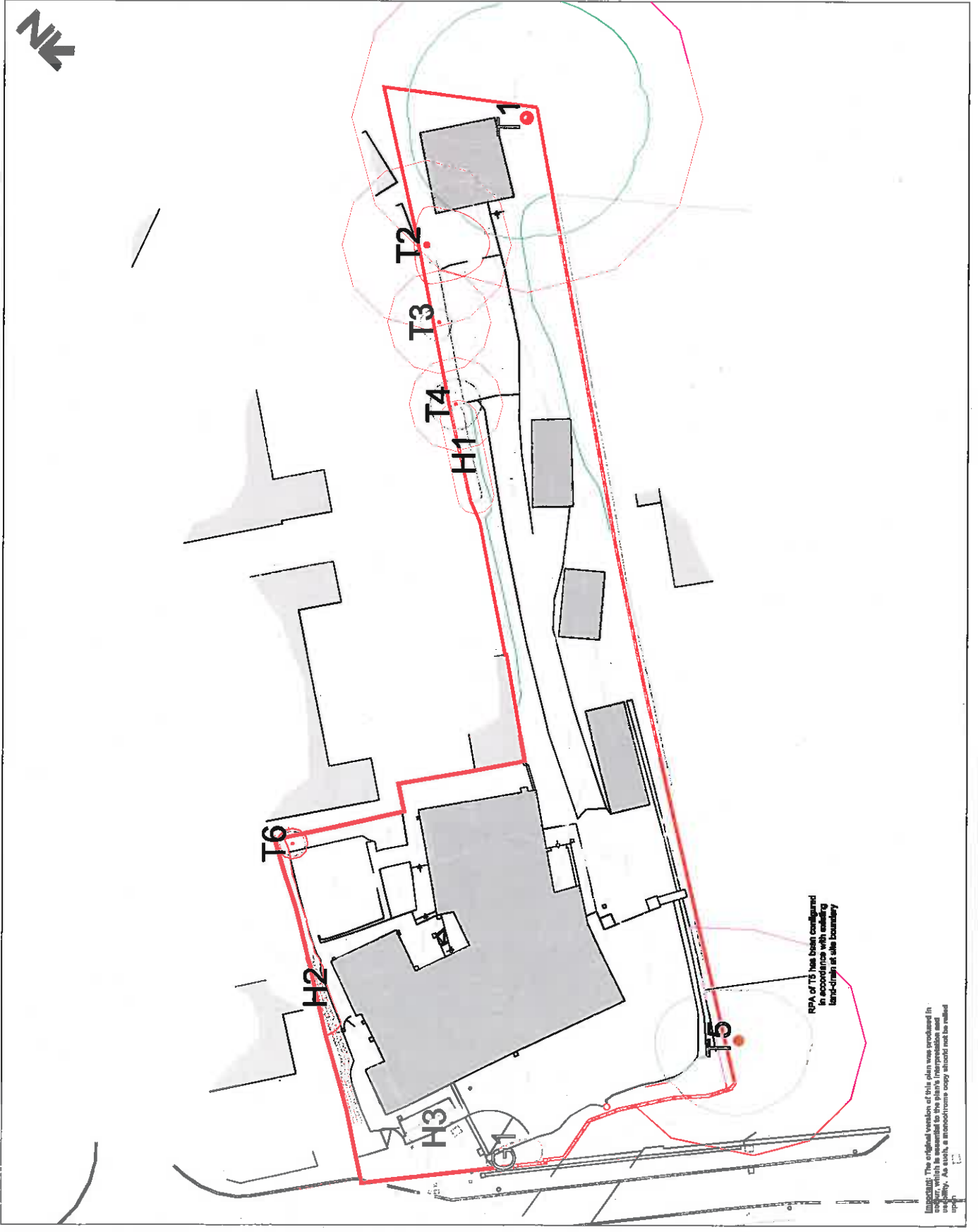
Agent for Client:
SUNDERLAND PEACOCK &
ASSOCIATES LTD

Title:
TREE CONSTRAINTS PLAN
In Relation to Proposed Redevelopment

Scale: 1:2000/042
Date: February 2015
Drawn by: PH
Checked by: KR



Ref: BTCS15-TCP Rev:



Important: The original version of this plan was produced in
accordance with the Tree Preservation Act 1999 and the Planning
Act 2008. As such, it is a best estimate and should not be relied
upon.

KEY

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

Please refer to appropriate Arboricultural Impact Assessment Report for further details in respect of the above.

TREE CATEGORIES:

Those to be Considered for Retention:

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

Category 'B' Tree/Crough/Hedge
Trees of a Medium Quality with an Estimated Remaining Life Expectancy of at Least 20 Years

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

Those Considered Unsuitable for Retention:
Category 'D' Tree/Crough/Hedge
Trees of such a Condition that they are not considered to be of sufficient value to justify the cost of retention and/or the cost of the proposed development.

Root Protection Zones (RPZs)
Areas of Ground Around Trees that should be protected from any proposed development which might threaten the health and stability of the trees.

Notes:
1. The locations of the trees 'T' and 'H' and the groups 'G' are shown on the plan. The locations of the trees 'T' and 'H' and the groups 'G' are shown on the plan. The locations of the trees 'T' and 'H' and the groups 'G' are shown on the plan.

Project:
THORN COTTAGE
12 KNOWSLEY ROAD
WILPSHIRE
LANCASHIRE
BB1 9PX

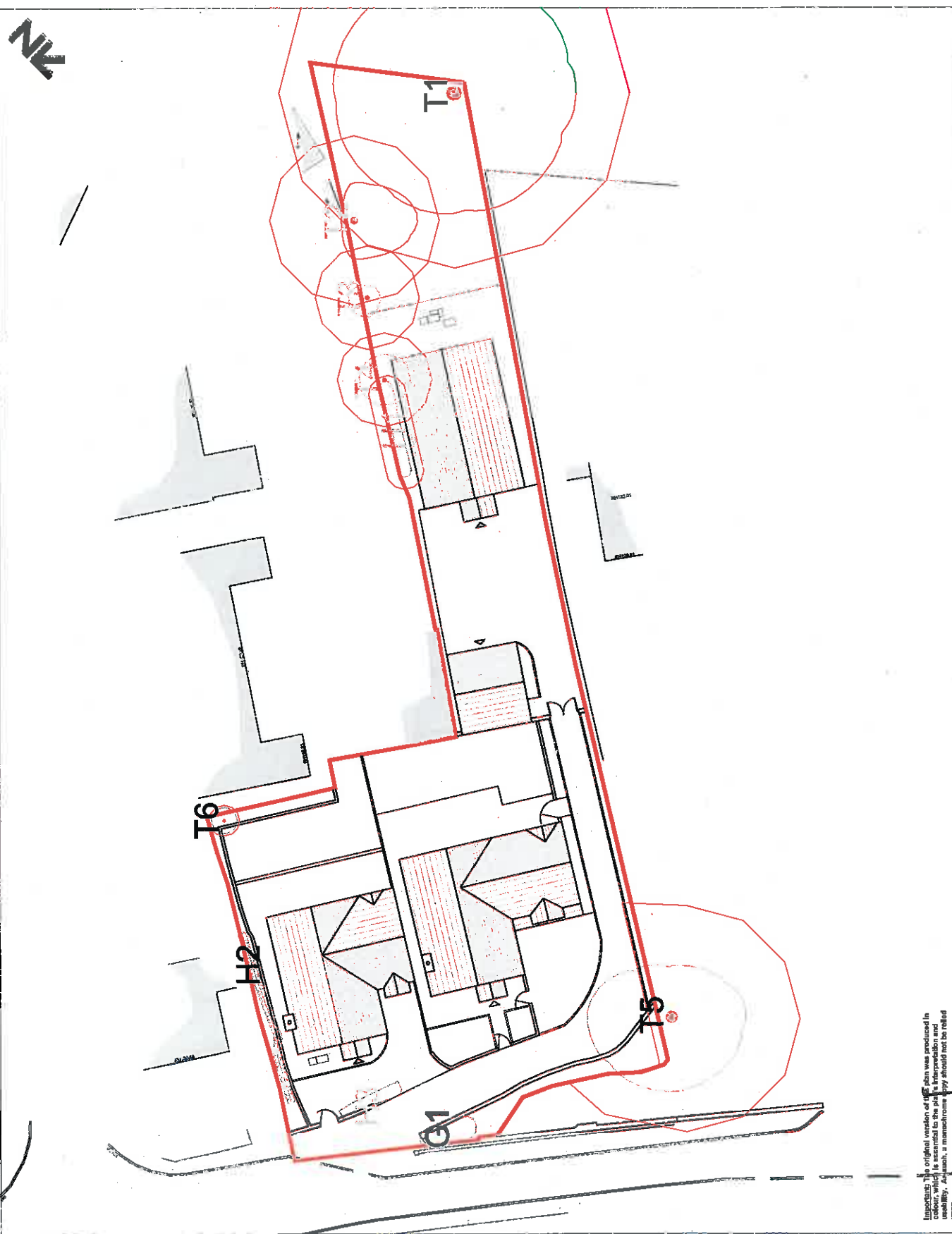
Agent for Client:
SUNDERLAND PEACOCK &
ASSOCIATES LTD

Title:
TREE IMPACT PLAN
in Relation to Proposed Redevelopment

Scale:
1:2000/A2
Date:
March 2015
Drawn by:
PH
Checked by:
KR



Ref: BTCD/15-TIP Rev: 1



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.