



Arboricultural Impact Assessment

in Relation to Proposed Conversion of
Existing Barn to a Residential Dwelling at



**Betty Barn, Slaidburn Road,
Waddington, Lancashire, BB7 3JQ**

Prepared by:

Bowland 
Tree Consultancy Ltd

October 2019

**ARBORICULTURAL IMPACT ASSESSMENT
BETTY BARN, WADDINGTON**

Control sheet

Project No.: BTC1867

Site: Betty Barn, Slaidburn Road, Waddington, Lancashire, BB7 3JQ

Agent for Client: Ingham and Yorke LLP

Council: Ribble Valley Borough Council

Survey Date: 12 October 2019

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DISCLAIMER

Survey Limitations: Unless otherwise stated all trees are surveyed from ground level using non-invasive techniques, in sufficient detail to gather data for and inform the design of the current project only. The disclosure of hidden crown and stem defects, in particular where they may be above a reachable height or where trees are ivy clad or 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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**ARBORICULTURAL IMPACT ASSESSMENT
BETTY BARN, WADDINGTON**

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1.0 INTRODUCTION

Terms of Reference

- 1.1 Bowland Tree Consultancy Ltd was instructed to:
- Survey, as individuals or by group, all trees having reasonable potential to affect or to be adversely affected by the proposed development of the site under consideration;
 - Annotate the proposed site plan to produce a Tree Constraints Plan and a Tree Impact Plan, identifying tree retention categories, crown spreads, Root Protection Areas, trees for removal, trees proposed for retention, and indicative new tree planting proposals, etc.;
 - Prepare a tabulated Tree Survey Schedule based on guidance specified BS5837:2012 - Trees in Relation to Design, Demolition and Construction – Recommendations;
 - Evaluate the potential tree related impacts and design conflicts of the proposals, based on the supplied development proposal plan;
 - Advise on removal, retention and management options for the trees in the current context and in the context of the proposed development;
 - Advise on suitable retained tree protection measures required during development; and
 - Produce an Arboricultural Impact Assessment report outlining the main tree related issues and reasonably foreseeable tree impacts in relation to the proposals and indicating suitable mitigation provisions and retained tree protection measures.

Scope and Purpose of Report

- 1.2 By detailing foreseeable tree related issues this report is intended to assist the Local Planning Authority (LPA), in this case Ribble Valley Borough Council, in their review of the proposed development and, as such, should be supplied to them in support of the planning application to which it pertains. Essentially, the report provides an initial analysis of the impacts that the proposed development is projected to have on trees located both within the site and, where practicable, on land immediately adjacent. It also offers guidance on suitable retained tree management and compensation for projected losses, along with advice on appropriate tree protection measures in the context of the proposals in accordance with current guidance.

Site Visit, Data Collection and Tree Plans

- 1.3 Further to the instruction it is confirmed that a tree survey was carried out on 12 October 2019, in accordance with the preceding disclaimer, and all tree data collected on site is set out in the attached tabulated Tree Survey Schedule (TSS) at Appendix One which, for ease of interpretation, should be read alongside the appended BS5837:2012 Table 1.
- 1.4 The survey identified nine individual trees (prefixed 'T') which have been numbered accordingly on the appended Tree Constraints Plan (TCP) and Tree Impact Plan (TIP). The TCP, which details the existing site along with the readily definable tree constraints, and the TIP, which has an overlay of the proposed development along and the projected tree related impacts, are based on a topographical survey plan and a site proposal plan, which were provided in electronic format by the project architects, John Coward Architects Ltd. In turn, for the purpose of this report, it is presumed that the provided plans' details are accurate.
- 1.5 The purpose of the TIP is to give an initial indication of the impacts that the proposed development is projected to have on trees, as well as to highlight areas where special construction and/or protection considerations may be necessary. It should subsequently be used by the LPA's tree specialist to preliminarily assess if the proposed development can potentially be constructed in accordance with BS5837:2012 and, along with the information provided in this report, as a basis for the LPA to request further details regarding specific matters relating to trees at suitable stages in the planning process.

2.0 STATUTORY PROTECTION IN RESPECT OF TREES AND ASSOCIATED WILDLIFE

Tree Preservation Orders and Conservation Area Designations

- 2.1 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 75 mm 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.
- 2.2 According to the plans available on Ribble Valley Borough Council's website, the site does not stand within a CA and, from information provided by the project agent, Ingham and Yorke LLP, none of the trees are afforded TPO protection.
- 2.3 The council's website does not, however, have an interactive map of trees subject to TPOs and, as such, it is essential that the presence of any such statutory protection be checked directly with Ribble Valley Borough Council's planning department prior to either scheduling or carrying out any tree works that are not directly related to the implementation of a detailed (i.e. full) planning permission.

Protected Species

- 2.4 Nesting birds are afforded statutory protection under the Wildlife & Countryside Act (1981) (as amended) and their potential presence should therefore be considered when clipping hedges, removing climbing plants and pruning and removing trees. The breeding period for woodlands runs from March to August inclusive. Hedges provide valuable nesting sites for many birds and clipping should therefore be avoided during March to July. Trees, hedges and ivy should be inspected for nests prior to pruning or removal and any work likely to destroy or disturb active nests should be avoided until the young have fledged.
- 2.5 All bat species and their roosts are protected under Schedule 5 of the Wildlife & Countryside Act (1981) (as amended) and under Schedule 2 of the Conservation of Habitats & Species Regulations 2010 (as amended). In this respect it should be noted that it is possible that unidentified bat habitat features may be located high up in tree crowns and all personnel carrying out tree works at the site should therefore be vigilant and mindful of the possibility that roosting bats may be present in trees with such features. If any bat roosts are identified then it is essential that works are halted immediately and that a suitably qualified and experienced ecologist investigates and advises on appropriate actions prior to works continuing.
- 2.6 In this respect it is understood, from information provided by the project planning consultants, Steven Abbott Associates LLP, that the project ecologists, ERAP, have surveyed the site and have subsequently made recommendations with specific regard to bats and trees. In turn, any such recommendations made by the ecologists are to be strictly adhered to by all project personnel.

Felling Licences

- 2.7 Subject to certain exemptions the Forestry Act (1967) requires that a 'Felling Licence' be obtained to remove growing trees amounting to more than five cubic metres of timber in a calendar quarter. Felling Licences are administered by the Forestry Commission and contravention of the associated controls can incur substantial penalties.

- 2.8 A felling licence is, however, not required for the felling of trees immediately required for the purpose of carrying out development authorised by a full planning permission granted under the Town and Country Planning Act 1990.

3.0 THE SITE AND THE SURROUNDINGS

- 3.1 The site under consideration is located in a rural area approximately three kilometres north-west of Clitheroe and approximately 700 metres north-west of the village of Waddington, within the administrative boundaries of Ribble Valley Borough Council.
- 3.2 It currently consists of a stone built agricultural barn with a small yard to its east, and grass pasture to the east, south and west of the building (see TCP). The site is bordered to the north by a compacted gravel access track to a neighbouring farm, with further grass pasture beyond the track, to the east by the B6478 Slaidburn Road, and to the south and west by further grass pasture.
- 3.3 There are several trees growing as individuals towards the northern and eastern boundaries and a broadly linear group adjacent to Slaidburn Road to the south-east of the site, and there is an existing vehicular access point off Slaidburn Road to the site's north-east (see TCP). As also shown on the appended TCP, the ground levels within the site vary by up to approximately four metres, from the highest point to the north, to the lowest point to the south.

4.0 THE TREE POPULATION

- 4.1 As noted previously, a total of nine individual trees were surveyed for the purpose of this appraisal. They range from young to post-mature in age, with heights of up to 18.5 metres, maximum diametrical crown spreads of up to 22 metres, and stem diameters of up to 850 millimetres. Detailed tree dimensions and other pertinent information, such as structural defects and physiological deficiencies, are included in the Tree Survey Schedule (TSS) at Appendix One.
- 4.2 In respect of the survey it should be noted that tree quality is categorised within the existing context without taking any site development proposals into account. However, recommendations for works included in the TSS take both current site usage into consideration and the proposed site development where there are definable development related issues with regard to specific trees.
- 4.3 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. In this respect the TSS includes a column ('Cat. Grade') listing the trees' respective retention values, where they are rated either 'A', 'B', 'C' or 'U', as per BS5837:2012 Table 1 (Appendix One). 'A' category trees are those considered to be of 'high quality' and, accordingly, the most suitable for retention, whilst 'B' category trees are those considered to be of 'moderate quality', and 'C' category trees are those considered to be of 'low quality' with a correlated low retention value. In turn, 'U' category trees are those that are considered to be 'unsuitable for retention'.
- 4.4 As detailed in Table A (overleaf) four trees were categorised as moderate quality (i.e. 'B' category), one tree was categorised as low quality ('C' category), and four trees were categorised as unsuitable for retention regardless of the proposals ('U' category).

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

	Ret. Cats.	Tree Numbers	Totals
Those of a moderate or high quality that should be afforded appropriate consideration in the context of development	'A'	-	-
	'B'	T1, T2, T5, T9	4 Trees
Those of a low quality that should not be considered a material constraint to development	'C'	T8	1 Tree
Those that should be removed for sound management reasons regardless of site proposals	'U'	T3, T4, T6, T7	4 Trees
			= 9 Trees in Total

- 4.5 With regard to the 'U' category trees it should be noted that Ash trees T3 and T4 were seen to be expressing multiple symptoms of the effects of colonisation by Ash Dieback Disease (*Hymenoscyphus fraxinea*). Consequently, based on recent observations of the effects of the disease on similar trees within the locality, it is considered that there is a high risk that the Ash trees in question will succumb to the disease and subsequently decline over a relatively short timescale (i.e. several years). In turn, it can reasonably be concluded that the effects of the disease severely limits the remaining safe life expectancies of these trees, regardless of any further health issues, as detailed in the TSS, and would subsequently lead to their loss regardless of the development proposals.

5.0 THE DEVELOPMENT PROPOSAL AND ITS PROJECTED ARBORICULTURAL IMPACTS

The Development Proposal

- 5.1 The proposed site plan, as prepared by the project architects, indicates that the planning application is for the following (see TIP):
- 5.1.1 The conversion of the existing stone barn into a residential dwelling, with the construction of a small single-storey lean to extension on its western elevation;
 - 5.1.2 Hard and soft landscaping works in the area immediately around the barn;
 - 5.1.3 The removal of the section of the existing dry-stone wall that runs in an east-west direction just to the north of tree T2, and the construction of a new length of stone wall to the north of the removed section, thereby closing the existing vehicular access point (see 5.1.4 and 5.1.5, below);
 - 5.1.4 The closure of a section of the existing access track that runs immediately north of the barn;
 - 5.1.5 The construction of a new access road to run from Slaidburn road to the south of tree T2, and connect with the existing access track to the west of the barn and with a private car parking area to the south-east of the barn; and
 - 5.1.6 The proposed re-use and improved access is supported by a volunteered new planting of a native tree copse to the south of tree T2 and to the north of the new access road.

Projected Arboricultural Losses Relating to the Proposal

- 5.2 From the information provided to date it is projected that, as detailed in Table B (overleaf) construction of the development as proposed will require the removal of one tree of moderate quality (i.e. 'B' category). Additionally, as also detailed in Table B, four trees are considered unsuitable for retention, both in the context of the existing site and the proposed 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 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'	T5	-	1 Tree
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 plans	'U'	-	T3, T4, T6, T7	4 Trees
Totals		1 Tree	4 Trees	= 5 Trees in Total

Compensation for Projected Arboricultural Losses as Part of the Development's Landscaping

- 5.3 As indicated on the site proposal plan the provision of a new native tree copse is proposed to the south of tree T2 and to the north of the new access road. In turn, the delivery of a high-quality native tree copse is, over time, projected to adequately compensate for the identified development related single tree loss, as well as for the loss of those category 'U' trees that would normally be removed in accordance with prudent arboricultural management regardless of the proposed development.
- 5.4 Consequently, specific details regarding new tree planting as part of a landscaping scheme, including detailed information such as species, planting stock sizes, and precise tree locations, should be prepared by a suitably qualified and experienced landscape architect in accordance with the relevant government guidance, specifically BS8545:2014 - Trees: From Nursery to Independence in the Landscape – Recommendations, and section 5.6 and Table A.1 of BS5837:2012.
- 5.5 Accordingly, the provision of and adherence to a detailed landscape proposal plan can be assured through the imposition of a suitably worded condition attached to a planning approval.

Special Materials and Working Methods for Proposed Construction within RPAs

- 5.6 As detailed on the TIP and discussed at section 5.1 there is a section of existing compacted gravel access track, the use of which is to be discontinued, that currently encroaches within the Root Protection Areas (RPAs) of 'B' category Sycamore trees T1 and T2. However, from information provided by Ingham and Yorke LLP the hard surface in the area of the length of track in question that encroaches within the RPAs is to be retained and landscaped over. In this respect it should be noted that existing soft surfaces adjacent to the hard surfaced track should be retained at the current levels within the RPAs.
- 5.7 From the proposal plan provided it is also understood that a section of dry stone wall is to be removed along the current northern boundary of the field, to the north of tree T1, and reconstructed along the northern and eastern edge of the site to form a new boundary wall (see TIP). In turn, it is essential that the removal of the length of the existing dry stone wall, where it encroaches into the RPAs of trees T1 and T2, be carried out by hand and in strict accordance with section 7.2 and 7.3 of BS5837:2012.
- 5.8 In this respect it is noted that the construction of a dry stone wall, in a traditional style, generally involves only a very shallow, hand dug foundation, with larger stones placed within the ground and the subsequent wall constructed on top of this without the use of mortar or concrete foundations. Subsequently, where the wall is to be constructed through the RPAs of trees T1 and T2, then a traditional wall building method of hand working should be strictly

adhered to, with no machinery or vehicles to access onto the soft surfaces of the RPAs. Subsequently, where any roots above approximately 25mm diameter are uncovered during the setting of foundation stones then they are to be treated in strict accordance with section 7.2 of BS5837:2012, and be bridged with suitable stone work to both ensure their successful long term retention and reduce the potential for any such roots to cause future displacement of the new wall.

- 5.9 Furthermore, any additional landscaping works that are subsequently to be carried out within the RPAs of any of the retained trees are to be carried out in strict accordance with Section 8 of BS5837:2012, following on from the completion of the main construction phase and the removal of the Temporary Protective Fencing
- 5.10 With regard to the matters discussed above, whilst the walls are not the subject of any protection designation, it is understood that the client is happy that specific details regarding the timing, procedures, working methods and protective measures to be used in relation to the works under consideration should be included in an Arboricultural Method Statement (AMS) and on a Tree Protection Plan (TPP), which can be the subject of a condition as part of a planning approval (see paragraphs 6.6 and 6.7 for further details regarding Arboricultural Method Statements and Tree Protection Plans).

6.0 RECOMMENDATIONS FOR SUCCESSFUL TREE RETENTION IN THE CONTEXT OF DEVELOPMENT

Root Protection Areas and Construction Exclusion Zones

- 6.1 Adequate protection of the Root Protection Areas (RPAs) of retained trees 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 that should be protected by temporary protective fencing as Construction Exclusion Zones (CEZs) throughout the development process, thereby keeping the trees' root zones free from disturbance. Consequently, the RPA distances, as detailed in the TSS (see 6.2) and on the TCP and the TIP, give an idea of the on-site below-ground constraints in respect of tree roots and assist in planning for appropriate tree retention in relation to feasible development.
- 6.2 The TSS includes two columns listing the RPAs of the individually surveyed trees and, where applicable, the largest of the trees in any surveyed groups as overall areas in square metres and as radial distances. The radial RPAs are indicated as magenta coloured circles on the TCP and TIP.
- 6.3 With regard to CEZs the design, materials and construction of the fencing and ground protection measures should be appropriate for the intensity and type of site construction works, should conform to at least section 6.2 of BS5837:2012, and should be secured by the imposition of a suitably worded planning condition. A default Temporary Protective Fencing and Ground Protection Specification is included at Appendix Two.

Underground Utilities

- 6.4 The installation of underground utilities and drainage in close proximity to trees can cause serious damage to their roots. As such, it is essential that utilities be routed outside RPAs unless there is no other available option. Where RPAs cannot be avoided then guidelines set out in the National Joint Utilities Group publication 'Volume 4: NJUG Guidelines for the Planning, Installation and Maintenance of Utility Apparatus in Proximity to Trees (Issue 2) –

Operatives Handbook' should be followed (e.g. trenches of a very limited width to be hand dug or the use of directional drilling).

- 6.5 The proposed site plan indicates that, if correctly planned, there should be sufficient space to run the services and drainage outside the RPAs of the retained trees. In turn, in order to ensure that this advice is adhered to, the provision of a service plan, with all service runs and drainage routed outside retained tree RPAs, can be conditioned to a planning approval.

Arboricultural Method Statement and Tree Protection Plan

- 6.6 Government guidance¹ recommends that, where considered expedient by the LPA, an Arboricultural Method Statement (AMS) and a Tree Protection Plan (TPP) be prepared detailing special mitigation construction issues in relation to the development under consideration. Essentially, the AMS and TPP describe and detail 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.
- 6.7 In order to ensure that any such special working methods are followed, and that the retained trees are adequately protected throughout the development process, the production of and adherence to an AMS and TPP can be conditioned to a planning approval.

7.0 OTHER RECOMMENDATIONS

Non-Development Related Tree Works and Recommendations

- 7.1 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 development proposals 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

- 7.2 No tree pruning or removal works should commence on site until any planning conditions affecting such matters have been discharged by the Local Planning Authority.

Arboricultural Contractors

- 7.3 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

- 7.4 Tree 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.

¹ British Standard BS5837:2012

New Tree Planting

- 7.5 All tree planting at the site should be carried out in strict accordance with BS8545:2014 Trees: from nursery to independence in the landscape – Recommendations.

Retained Tree Management

- 7.6 Any tree risk management appraisals and subsequent recommendations made in this report were based on observations and site circumstances at the time of the 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.
- 7.7 In this respect, it should be noted 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. In turn, 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.

8.0 SUMMARY AND CONCLUSIONS

- 8.1 Nine individual trees were surveyed in respect of a proposal to convert an existing stone barn into a residential dwelling with associated hard and soft landscaping, to discontinue the use of an existing section of access track and, in turn, to construct a new length of access road to connect with the existing access track to the neighbouring properties and to the barn.
- 8.2 Four trees were categorised as moderate quality, one tree was categorised as low quality, and four trees were categorised as unsuitable for retention regardless of the development proposals.
- 8.3 An appraisal of the documentation provided to date identified that, exclusive of the four trees that are recommended for removal in accordance with prudent arboricultural management regardless of the proposals, construction of the development as proposed will require the removal of one moderate quality tree.
- 8.4 However, a new native tree copse is proposed at the site, the provision of which is projected to both adequately compensate for the loss of the moderate quality tree necessary to facilitate the safer access, and to mitigate for the projected future losses of the trees that are projected to be lost to disease and/or structural defects regardless of the development proposals.
- 8.5 Accordingly, the provision of and adherence to a landscape proposal plan, including specific details of the trees to be planted, can be assured through the imposition of a suitably worded condition attached to a planning approval.
- 8.6 Consequently, any new tree planting at the site, and any landscaping carried out within and close to retained trees' RPAs, should be carried out in strict accordance with current government guidance.
- 8.7 The appraisal also concluded that, in order to ensure successful existing tree preservation over the long-term, it is essential that the retained trees are protected in strict accordance with current Government guidance and the recommendations included herein.

- 8.8 In this respect it is essential that any subsequent landscaping, as well as the construction of a new section of dry stone wall, carried out within and adjacent to the RPAs of retained trees be carried out in strict accordance with current government guidance (i.e. using hand-tools only, etc.).
- 8.9 In turn, in order to ensure the protection of retained trees in accordance with these recommendations and proposals, the provision of and adherence to an Arboricultural Method Statement and Tree Protection Plan can be the subject of a condition on the planning permission sought.

REFERENCES

- BS42020:2013 - Biodiversity – Code of Practice for Planning and Development. BSI British Standards, London.
- BS8596:2015 - Surveying for Bats in Trees and Woodlands. BSI British Standards, London.
- BS8545:2014 - Trees: From Nursery to Independence in the Landscape – Recommendations. BSI British Standards, London.
- BS3998:2010 - Tree Work - Recommendations. BSI British Standards, London.
- BS5837:2012 - Trees in Relation to Design, Demolition and Construction – Recommendations. BSI British Standards, London.
- National House Building Council (2017). NHBC Standards Chapter 4.2 - Building Near Trees. NHBC, Amersham.
- National Joint Utilities Group (2007). Volume 4: NJUG Guidelines For The Planning, Installation And Maintenance Of Utility Apparatus In Proximity To Trees (Issue 2) – Operatives Handbook.

TREE SURVEY SCHEDULE FOR ARBORICULTURAL IMPACT APPRAISAL	
Site:	Betty Barn, Slaidburn Road, Waddington, Lancashire, BB7 3JQ
Agent for Client:	Ingham and Yorke LLP

Surveyor:	Phill Harris Chartered Arboriculturist
Survey Date:	12 October 2019
Job Reference:	BTC1867

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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 (m ²)	RPA Radius (m)	
T1	Sycamore	16	650#	N E S W	5 5 5 5	6 5	M	M	<ul style="list-style-type: none"> Located within a hedge on neighbouring land to north and therefore not inspected in detail. Stem bifurcates at a height of approximately 2m with a tight fork. Crown showing signs of a moderate reduction in vitality with small leaves. 	<ul style="list-style-type: none"> Retain tree in context of proposed development. Ensure protection of Root Protection Area (RPA) throughout course of proposed development in accordance with appended Temporary Protective Fencing Specification. Remove hard surfacing and construct dry stone wall within RPA following main construction phase in accordance with section 5 of Arboricultural Impact Assessment report (AIA). 	20+	B1	191	7.8
T2	Sycamore	18.5	800	N E S W	6 9 8 9.5	5 6	M	M	<ul style="list-style-type: none"> Approximately 400mm wide by 200mm tall area of evidently non-progressive basal decay to east of stem. Crown showing signs of a moderate reduction in vitality with small leaves. 	<ul style="list-style-type: none"> Retain tree in context of proposed development. Ensure protection of RPA throughout course of proposed development in accordance with Temporary Protective Fencing Specification. Remove hard surfacing and construct dry stone wall within RPA following main construction phase in accordance with section 5 of AIA. 	40+	B1	290	9.6
T3	Common Ash	7	80	N E S W	1.5 1.5 1.5 1.5	N/A 1.5	Y	M	<ul style="list-style-type: none"> Crown exhibiting multiple symptoms of effects of colonisation by Ash Dieback Disease. Short projected remaining life expectancy. 	<ul style="list-style-type: none"> Remove in accordance with prudent arboricultural management due to colonisation by Ash Dieback Disease and subsequent short projected remaining life expectancy. 	<10	U	3	0.96
T4	Common Ash	15.5	850	N E S W	9 9 9 9	5-S 2	M	M	<ul style="list-style-type: none"> Occluded shear crack extending for a distance of approximately 3m up north side of stem. Stem trifurcates at a height of approximately 5m. Approximately 200mm diameter cavity above union of approximately 400mm diameter primary branch to south. Crown exhibiting multiple symptoms of effects of colonisation by Ash Dieback Disease. Short projected remaining life expectancy. 	<ul style="list-style-type: none"> Remove in accordance with prudent arboricultural management due to poor structural condition (see Comments) and colonisation by Ash Dieback Disease and subsequent short projected remaining life expectancy. 	<10	U	327	10.2

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 half nearest metre - where possible approximately 80% are measured using an electronic clinometer and the remainder estimated against the measured trees. In the case of Groups and Woodlands the measurement listed is that of the highest tree
Stem Diam.:	Stem diameter in millimetres, to nearest 10mm - measured and calculated as per Annex C of BS5837:2012. MS = multi-stemmed, TS = twin-stemmed
Branch Spread:	Crown radius measured (or estimated where considered appropriate) from the four cardinal points (north, east, south and west) to give an accurate visual representation of the crown
Branch & Canopy Clearances:	Existing height above ground level, in metres, of first significant branch and direction of growth (e.g. 2.5-N) and of canopy at lowest point - to inform on crown to height ratio, potential for shading, etc.
Life Stage:	Estimated age class - Y = young, SM = semi-mature, EM = early-mature, M = mature, PM = post-mature
PC:	Physiological Condition - a measure of the tree('s) overall vitality, i.e. D = Dead, MD = Moribund, P = Poor, M = Moderate, G = Good
General Observations and Comments:	Comments relating to the tree('s) overall condition and any other pertinent factors including structural defects, current and potential direct structural damage, physiological decline, poor form, etc.
Management Recommendations:	Either Preliminary or In Consideration of the Proposal - In the case of Arboricultural Constraints Surveys the recommended management works only take existing site and tree circumstances and conditions into account and not proposed developments. Arboricultural Impact Assessment and Method Statement related 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 m ² - 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	
Site:	Betty Barn, Slaidburn Road, Waddington, BB7 3JQ
Agent for Client:	Ingham and Yorke LLP

Surveyor:	Phill Harris Chartered Arboriculturist
Survey Date:	12 October 2019
Job Reference:	BTC1867

No.	Species	Height	Stem Diam.	Branch Spread	Branch & Canopy Clearances	Life Stage	PC	General Observations and Comments	Management Recommendations	ERC	Cat. Grade	RPA (m)	RPA Radius (m)
T5	Common Oak	17.5	680	N E S W 8 8 3 5	8-N 4	EM	G	<ul style="list-style-type: none"> Moderate stem lean and highly biased crown north due to partial suppression by neighbouring tree T7. 	<ul style="list-style-type: none"> Remove in order to construct proposed vehicular access point from Slaidburn Road. 	40+	B1	209	8.16
T6	Common Hawthorn	6	200	N E S W 1 2 2 2	N/A 1	M	MD	<ul style="list-style-type: none"> Evidently originally formed part of hedgerow. Dense ivy into crown. Crown showing signs of a significant reduction in vitality with extensive dieback. Short projected remaining life expectancy. 	<ul style="list-style-type: none"> Remove in accordance with prudent arboricultural management due to short projected remaining life expectancy (see Comments). 	<10	U	18	2.4
T7	Sycamore	16.5	780	N E S W 5 10 4 10.5	4-W 4	M	P	<ul style="list-style-type: none"> Approximately 700mm tall by 200mm wide basal stem cavity to north, extending over 1m into stem and, evidently, below ground level, with extensive and evidently progressive decay. Approximately 350mm diameter target canker to stem base to south opposite to decay cavity. Large target canker around the circumference of approximately 300mm diameter primary branch to west, at a distance of approximately 5m from union to stem. Crown showing signs of a substantial reduction in vitality with small leaves and sparse foliage cover. 	<ul style="list-style-type: none"> Remove in accordance with prudent arboricultural management due to poor structural condition (see Comments). 	<10	U	275	9.36
T8	Sycamore	17	790	N E S W 5 12 4 10	5-E 3	M	M	<ul style="list-style-type: none"> Several basal stem cavities to west to approximately 300mm diameter, with evidently non-progressive decay within. Has sustained several primary branch failures to approximately 300mm diameter. Crown showing signs of a moderate reduction in vitality with small leaves. Not projected to be impacted by proposed development. 	<ul style="list-style-type: none"> Retain tree in context of proposed development. NB: No protective measures necessary, as not projected to be impacted by development as proposed. 	10+	C1	282	9.48
T9	Sycamore	18.5	820	N E S W 4 8.5 4 8.5	5 3	M	M	<ul style="list-style-type: none"> Crown showing signs of a moderate reduction in vitality. Not projected to be impacted by proposed development. 	<ul style="list-style-type: none"> Retain tree in context of proposed development. NB: No protective measures necessary, as not projected to be impacted by development as proposed. 	20+	B1	304	9.84

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)				
<p>Category U</p> <p>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</p>	<ul style="list-style-type: none"> ▪ 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 <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
1. Mainly arboricultural qualities		2. Mainly landscape qualities	3. Mainly cultural values, including conservation	
Trees to be considered for retention				
<p>Category A</p> <p>Trees of high quality with an estimated remaining life expectancy of at least 40 years</p>	<p>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)</p>	<p>Trees, groups or woodlands of particular visual importance as arboricultural and/or landscape features</p>	<p>Trees, groups or woodlands of significant conservation, historical, commemorative or other value (e.g. veteran trees or wood-pasture)</p>	Green
<p>Category B</p> <p>Those of moderate quality and value: those in such a condition as to make a significant contribution. A minimum of 20 years is suggested.</p>	<p>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</p>	<p>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</p>	<p>Trees with clearly identifiable conservation or other cultural benefits</p>	Blue
<p>Category C</p> <p>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</p>	<p>Trees not qualifying in higher categories</p>	<p>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</p>	<p>Trees with very limited conservation or other cultural benefits</p>	Grey
	<p>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</p>			

- 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(s) defined by the Root Protection Areas or, if applicable, the Construction Exclusion Zones, as detailed on the associated Tree 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; 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 LPA shall inspect and approve the Temporary Protective Fencing.

Figure 1: CEZ Warning Sign

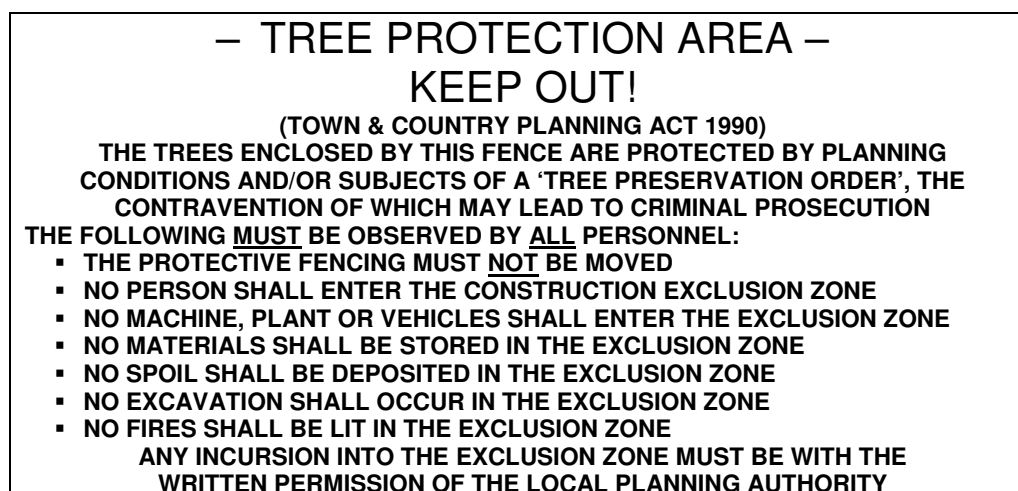
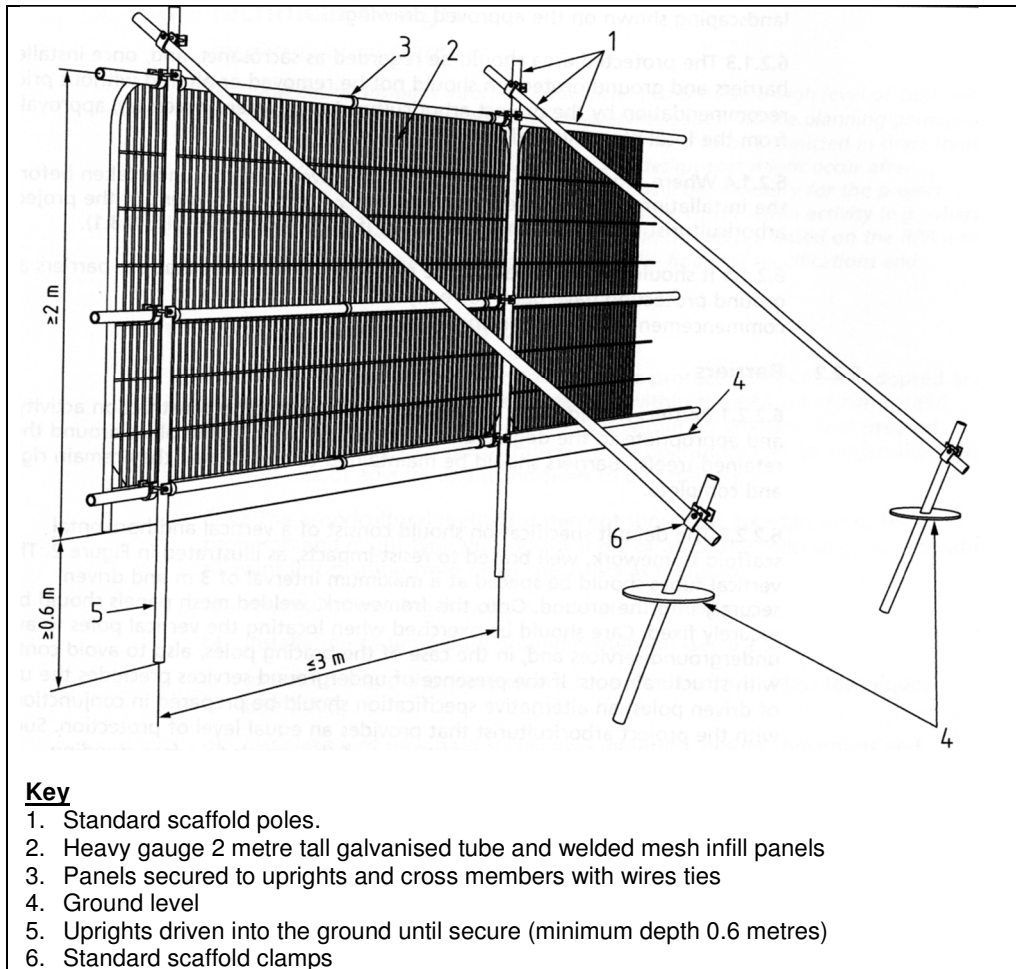


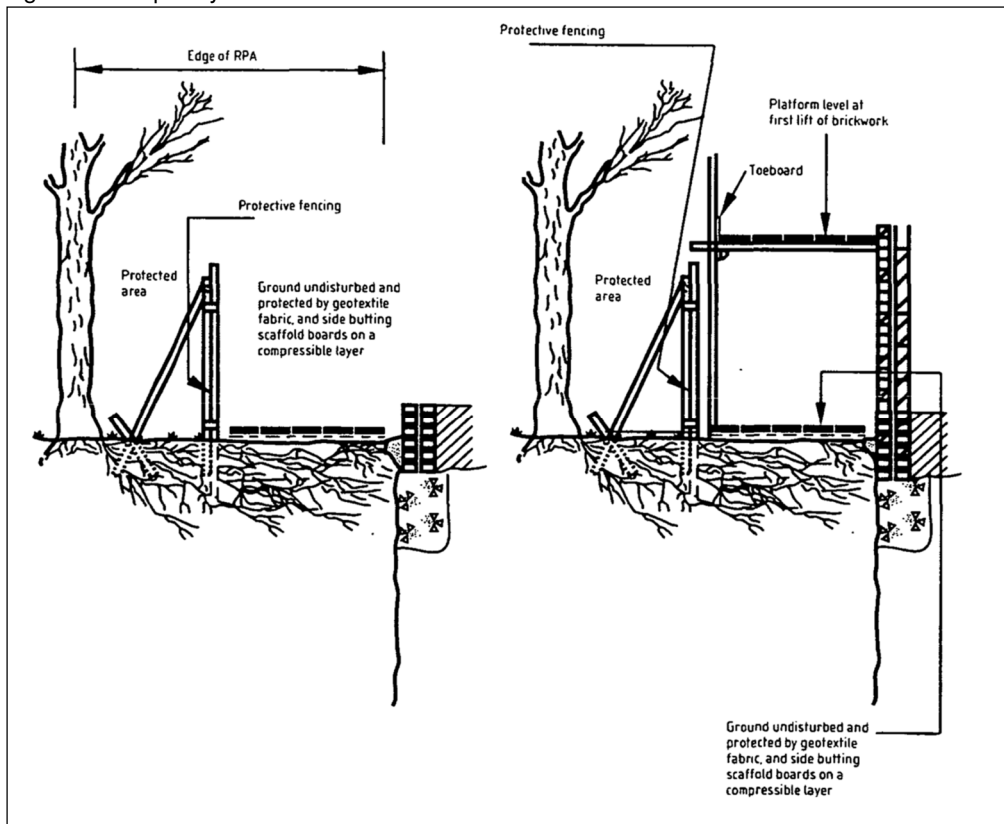
Figure 2: BS5837:2012 Default specification for protective barrier

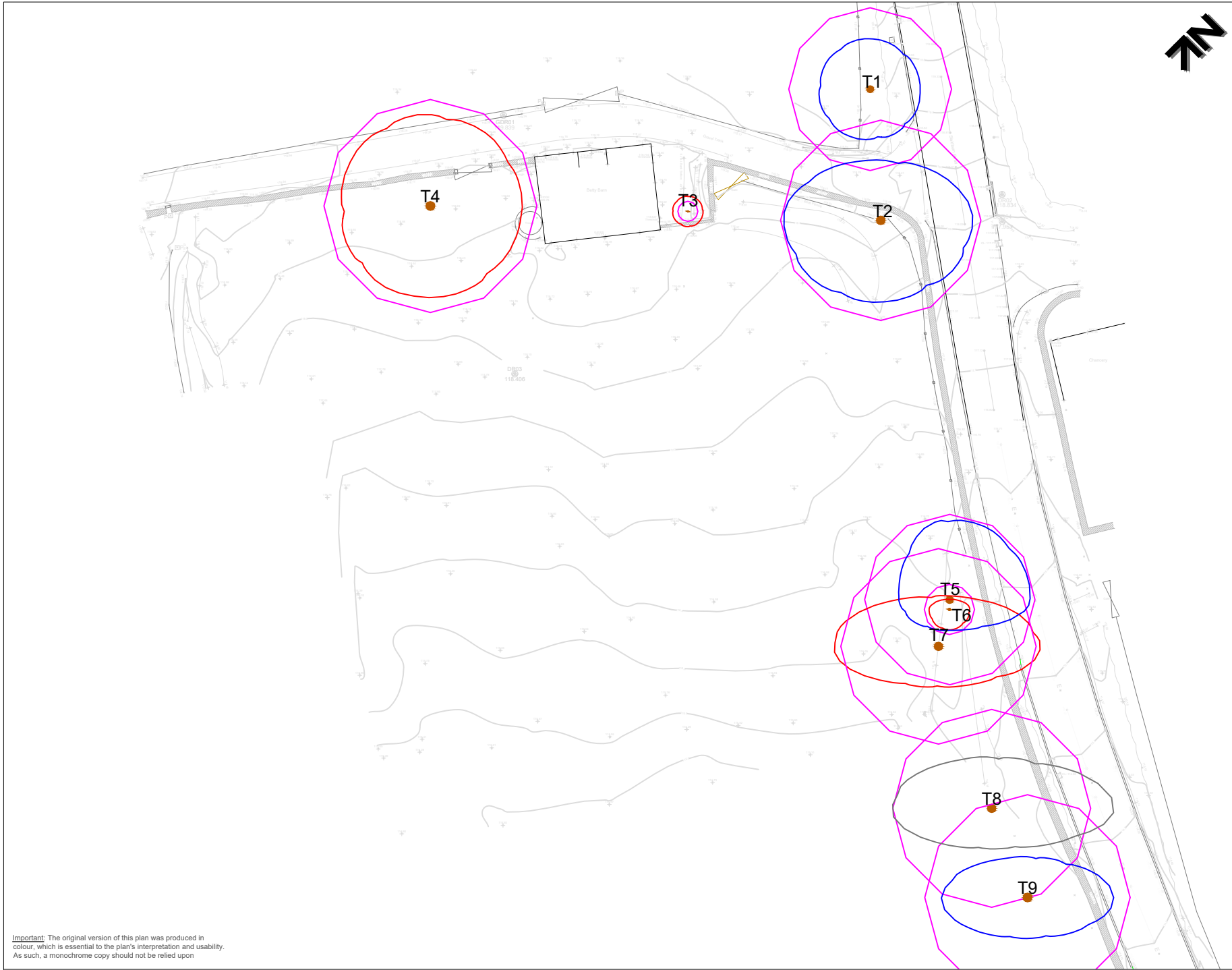


Temporary Ground Protection

1. Any necessary Temporary Ground Protection areas shall conform to Figure 3, below, unless otherwise agreed with the LPA.
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. 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.
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.

Figure 3: Temporary Ground Protection – Recommended Construction





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

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 Appended Temporary Protective Fencing Specification

Project:
BETTY BARN
SLAIDBURN ROAD
WADDINGTON
LANCASHIRE
BB7 3JQ

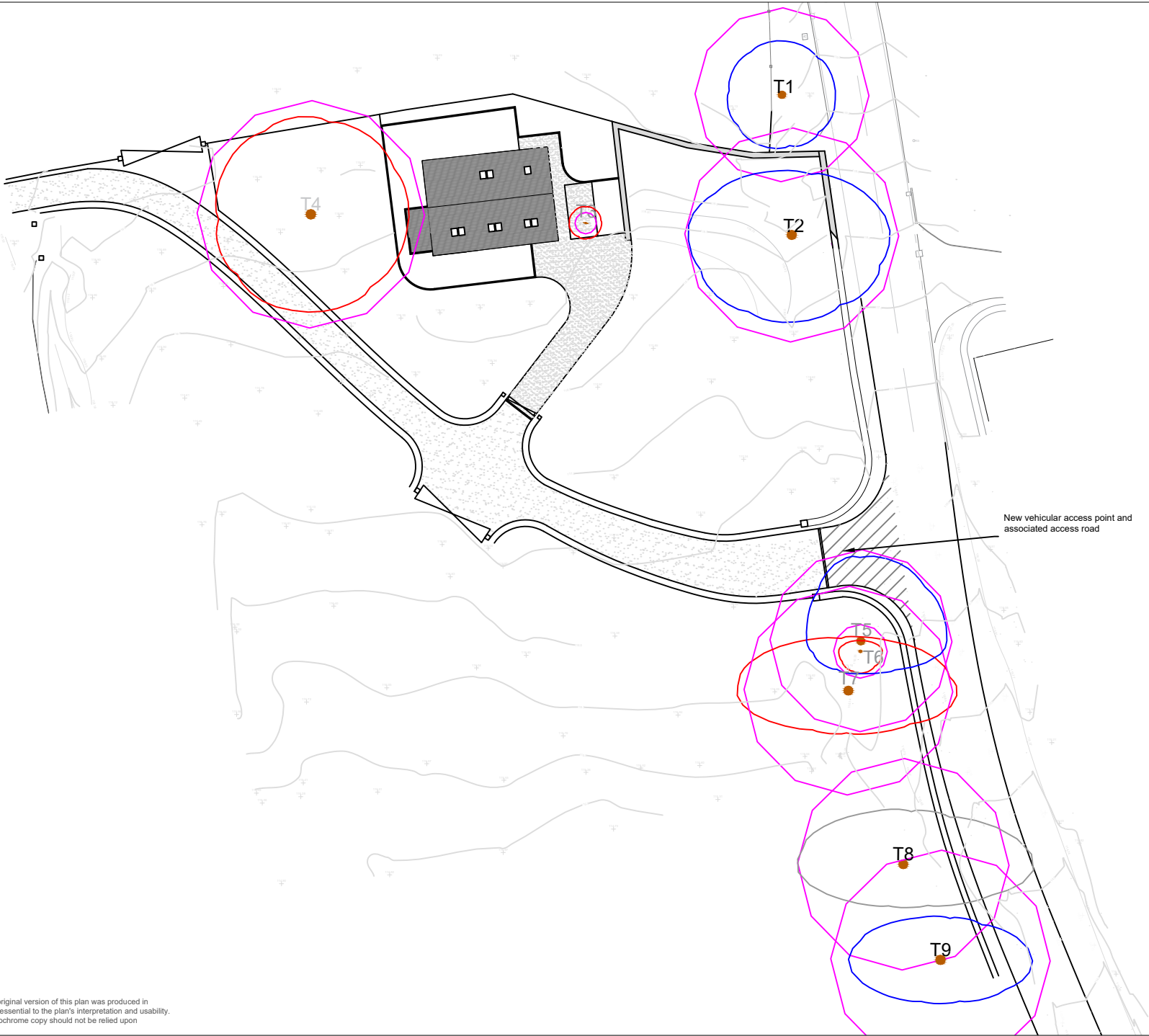
Agent for Client:
INGHAM AND YORKE LLP

Title:
TREE CONSTRAINTS PLAN
in Relation to Proposed Conversion of Existing Barn to Residential Usage

Scale: 1:500@A4
Date: October 2019
Drawn by: PH
Checked by: ET



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:

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

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

Root Protection Areas (RPAs):

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

New vehicular access point and associated access road

Project:
BETTY BARN
SLAIDBURN ROAD
WADDINGTON
LANCASHIRE
BB7 3JQ

Agent for Client:
INGHAM AND YORKE LLP

Title:
TREE IMPACT PLAN
in Relation to Proposed Conversion of Existing Barn to a Residential Dwelling

Scale: 1:500@A4
Date: October 2019
Drawn by: JL
Checked by: PH



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