Arboricultural Impact Assessment

in Relation to Proposed Construction of a Single Detached Two-Storey Dwelling at

Land South of 39 Clitheroe Road, Whalley, Lancashire, BB7 9AD

Prepared by:

Bowland Tree Consultancy Ltd

May 2018

Control sheet

Project No.:	BTC1492
Site:	Land south of 39 Clitheroe Road, Whalley, Lancashire, BB7 9AD
Clients:	Mr and Mrs Bentley
Agent for Client:	Sunderland Peacock & Associates Ltd.
Council:	Ribble Valley Borough Council
Survey Date:	4 January 2018
Surveyor:	Jennie Keighley PhD MSc MArborA
Report Prepared by:	Jennie Keighley PhD MSc MArborA
Report Checked by:	Phill Harris MSc BSc(Hons) HND MArborA CEnv MICFor
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Contact Details

Bowland Tree Consultancy Ltd
First Floor
11 Cannon Street
Preston
Lancashire
PR1 3NR

T: 01772 437150
E: info@bowlandtreeconsultancy.co.uk

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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APPENDICES

PLANS

1.0 INTRODUCTION

Terms of Reference

1.1 Bowland Tree Consultancy Ltd were instructed to:

a) 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;
b) Annotate the proposed site plan to produce a Tree Impact Plan, identifying tree retention categories, crown spreads, Root Protection Areas, trees to be removed, etc.;
c) Prepare a tabulated Tree Survey Schedule based on guidance specified BS5837:2012 - Trees in Relation to Design, Demolition and Construction – Recommendations;
d) Evaluate the potential tree related impacts and design conflicts of the proposals, based on the supplied development proposal plan;
e) Advise on removal, retention and management options for the trees in the current context and in the context of the proposed development;
f) Advise on suitable retained tree protection measures required during development; and
g) 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 to its boundaries. It also offers guidance on suitable retained tree management and mitigation for projected losses, along with advice on appropriate tree protection measures in the context of the proposed development in accordance with current guidance.

Site Visit, Data Collection and Tree Plans

1.3 Further to the instruction a tree survey was carried out on 4 January 2018, 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 16 individual trees (prefixed ‘T’), four groups of trees (prefixed ‘G’), and three hedges (prefixed ‘H’), which have been numbered accordingly on the appended Tree Impact Plan (TIP). The TIP, which details the existing site with an overlay of the proposed development, along with the readily definable tree constraints and projected impacts, is based on a topographical survey-based proposal plan, which was provided in electronic format by the architects, Sunderland Peacock. In turn, for the purpose of this report, it is presumed that the provided plan’s 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 Ribble Valley Borough Council's website, the site does not stand within a CA. However, the website does not contain details of specific TPOs and it is therefore essential that the presence of any statutory tree protection be checked directly with the council's planning department prior to scheduling or carrying out any tree works that are not directly related to, and subsequently authorised in accordance with, the implementation of a detailed (i.e. full) planning permission.

Protected Species

2.3 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.

2.4 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 and 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 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.

Felling Licences

2.5 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. 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 residential area on the northern edge of the town of Whalley, Lancashire, and within the administrational boundaries of Ribble Valley Borough Council.

3.2 It is currently part of the extended garden area belonging to 39 Clitheroe Road and comprises a rectangular plot of lawn with trees and hedges around the boundaries. It is bordered to the north by further garden area of 39 Clitheroe Road, to the east by Clitheroe Road, and to the south and west by agricultural pasture. There is an existing, unmade vehicular access point, via a field gate, from Clitheroe Road, to the east.

3.3 The topographical survey plan provided indicates that the site sits on a very slight south-west-facing slope, which rises by approximately three metres, from the lowest point at the south-west corner of the site to the highest point at the north-east corner.

4.0 THE TREE POPULATION

4.1 As noted previously, a total of 16 individual trees, four groups of trees, and three hedges were surveyed for the purpose of this appraisal. They range from young to mature in age, with heights of up to 24 metres, maximum diametrical crown spreads of up to approximately 24 metres, and stem diameters of up to 830 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 B, below, one group was categorised as high quality (i.e. 'A' category), ten trees were categorised as moderate quality (i.e. 'B' category), four trees, two groups, and the three hedges were categorised as low quality (i.e. 'C' category), and two trees and one group were categorised as unsuitable for retention ('U' category).

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

	Ret. Cats.	Tree/Group/Hedge Numbers	Totals
Those of a moderate or high quality that should be afforded appropriate consideration in the context of development	**'A'**	G4	*1 Group*
	'B'	T2, T6, T7, T8, T9, T10, T12, T14, T15, T16	*10 Trees*
Those of a low quality that should not be considered a material constraint to development	**'C'**	T1, T3, T4, T5 G2, G3 H1, H2, H3	*4 Trees* *2 Groups* *3 Hedges*
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	**'U'**	T11, T13 G1	*2 Trees* *1 Group*
			= 16 Trees, 4 Groups & 3 Hedges in Total

5.0 THE DEVELOPMENT PROPOSAL AND ITS PROJECTED ARBORICULTURAL IMPACTS

The Development Proposal

5.1 The Proposed Site Plan (drawing no. 4386-P01), as prepared by Sunderland Peacock, indicates that the planning application is for the construction of a single, detached, two-storey dwelling with integrated garage and an access driveway, which is to utilise the existing vehicular access point off Clitheroe Road and be retained at the existing width (see TIP).

Projected Arboricultural Losses Relating to the Proposal

5.2 As detailed in Table B, below, it is projected that construction of the development as proposed will require the removal of one moderate quality (i.e. 'B' category) tree, one low quality (i.e. 'C' category) tree and two low quality hedges. Additionally, two trees and one group that are considered unsuitable for retention is recommended for removal regardless of the development proposals.

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'**	T8	-	*1 Tree*
Those of a low quality that should be afforded appropriate consideration in the context of development	**'C'**	T3 H1, H3	-	*1 Tree* *2 Hedges*
Those that should be removed for sound management reasons regardless of plans	**'U'**	G1	T11, T13 G1	*2 Trees* *1 Group*
Totals		*2 Trees* *1 Group* *2 Hedges*	*2 Trees* *1 Group*	***= 4 Trees,*** ***1 Group & 2 Hedges in Total***

Mitigation for Projected Tree Losses as Part of Site Landscaping

5.3 As indicated on the Planting Proposals plan (drawing number 782.1C) appended at Plan Two, as prepared by landscape architects Rycroft Associates, eleven new trees are proposed across the site as a component of site landscaping. This includes a mix of deciduous and coniferous species, including Common Oak, Scots Pine, Holly, Sweet Gum, Cherry, and Sweet Chestnut, which, over time, are projected to more than adequately mitigate for the small amount of necessary development-related tree losses. Furthermore, the Planting Proposals plan indicates that existing Thuja hedge H1 will be removed and replaced with a mixed native, predominantly Hawthorn, hedge, which is projected to offer a long-term improvement in biodiversity.

5.4 Accordingly, adherence to the Planting Proposals plan, prepared by Rycroft Associates and submitted in support of the planning application, can be assured through the imposition of a suitably worded condition attached to a planning approval.

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 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 RPAs of individually surveyed trees and, where applicable, the largest tree 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 TIP.

6.3 With regard to CEZs the design, materials and construction of the fencing 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 Specification is included at Appendix Two.

Underground Utilities and Drainage

6.4 The installation of underground utilities 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 A proposed service routing plan for the development under consideration, upon which to base an assessment of potential tree related impacts, has not been provided. However, the provision of a service plan, with all service runs routed outside retained tree RPAs, or where not possible, then with appropriate design and installation, can be conditioned to a planning approval.

Arboricultural Method Statement and Tree Protection Plan

6.6 Government guidance 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 necessary consents have been obtained from the LPA as part of a planning approval or in respect of any statutory tree protection (e.g. TPOs).

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.

New Tree Planting

7.5 All tree planting at the site should be carried out in accordance with BS8545:2014 Trees: from nursery to independence in the landscape – Recommendations, and in accordance with the guidance detailed in section 5.6 and Table A.1 of BS5837:2012.

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 Sixteen individual trees, four groups of trees, and three hedges were surveyed in respect of a proposal to construct a single detached dwelling with access at the site under consideration.

8.2 One group was categorised as high quality, ten trees were categorised as moderate quality, four trees, two groups, and the three hedges were categorised as low quality, and two trees and one group were categorised as unsuitable for retention.

8.3 An appraisal of the documentation provided to date identified that construction of the development as proposed will require the removal of one moderate quality tree, one low quality tree and two low quality hedges. Additionally, two trees and one group that are considered unsuitable for retention are recommended for removal regardless of the development proposals.

8.4 Nonetheless, a detailed landscaping plan has been prepared and is submitted in support of the application, proposing the provision of eleven new trees and a native hedge, which is projected to more than adequately mitigate for the small number of development-related losses. Accordingly, adherence to the provided landscaping plan can be conditioned to a planning approval.

8.5 In addition to the above it is 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.

8.6 Accordingly, in order to ensure adequate protection of retained trees, these factors should be included in a suitably detailed Arboricultural Method Statement and Tree Protection Plan, the provision of which and adherence to can be conditioned to a planning permission.

REFERENCES

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.

APPENDICES

TREE SURVEY SCHEDULE FOR ARBORICULTURAL IMPACT APPRAISAL		Surveyor:	Jennie Keighley PhD MSc MArborA	Page: 1 of 4
Site:	Land south of 39 Clitheroe Road, Whalley, Lancashire, BB7 9AD	Survey Date:	4 January 2018	
Clients:	Mr & Mrs Bentley	Job Reference:	BTC1492	

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	Sycamore	18	1x320 1x270 (ts)	N E S W	6 8 1 6	6 12	EM	M/G	▪ Crown biased to east and west due to neighbouring trees. ▪ Light deadwood to approximately 70mm throughout crown. ▪ Crown expressing a moderate reduction in vitality.	▪ Retain in context of proposed development. ▪ Protect Root Protection Area (RPA) throughout development using Temporary Protective Fencing (specification appended) to form a Construction Exclusion Zone (CEZ).	10+	C1/2	79	5.02
T2	Horse Chestnut	22	760	N E S W	6 10 6 8	2-SE 3	M	G	▪ Moderate stem lean east with associated basal flaring on western side. ▪ Stem bifurcates at a height of approximately 2m with very tight fork. ▪ Light deadwood to approximately 50mm throughout crown. ▪ Lower crown pruned away from neighbouring public footpath.	▪ Retain in context of proposed development. ▪ Protect RPA throughout development using Temporary Protective Fencing to form a CEZ.	20+	B1/2	261	9.12
T3	Sycamore	18	370	N E S W	4 7 5 3	5-S 5	M	G	▪ Stem base 0.3m from boundary retaining wall top. ▪ 0.5m above pavement height. ▪ Moderate stem lean to east and crown biased to south-east due to presence of neighbouring trees. ▪ Moderate deadwood to approximately 50mm throughout crown. ▪ Dead 100mm diameter, 2m long pruning stub overhanging neighbouring public footpath.	▪ Remove in context of site landscaping. ▪ Replace with 1no. new tree, as indicated in Planting Proposals plan by Rycroft Associates.	10+	C1/2	62	4.44
T4	Norway Maple	19	320	N E S W	1 3 3 2	12-S 12	M	G	▪ Very tall, thin tree due to presence of neighbouring trees.	▪ Retain in context of proposed development. ▪ Protect RPA throughout development using Temporary Protective Fencing to form a CEZ.	10+	C1	46	3.84

Headings and Abbreviations:

No. Allocated sequential reference number - Tree ('T'), Group ('G'), Woodland ('W') or Hedge ('H') reference number - refer to plan and to numbered tags where applicable
Species: Common name
Height: In metres, to nearest half metre – where possible approximately 80% are measured using an electronic clinometer and the remainder estimated against the measured trees. In the case of Groups and Woodlands the measurement listed is that of the highest tree
Stem Diam.: Stem diameter in millimetres, to nearest 10mm - measured and calculated as per Annex C of BS5837:2012. MS = multi-stemmed, TS = twin-stemmed
Branch Spread: Crown radius measured (or estimated where considered appropriate) from the four cardinal points (north, east, south and west) to give an accurate visual representation of the crown
Branch & Canopy Clearances: Existing height above ground level, in metres, of first significant branch and direction of growth (e.g. 2.5-N) and of canopy at lowest point – to inform on crown to height ratio, potential for shading, etc.
Life Stage: Estimated age class - Y = young, SM = semi-mature, EM = early-mature, M = mature, PM = post-mature
PC: Physiological Condition - a measure of the tree'(s)' overall vitality, i.e. D = Dead, MD = Moribund, P = Poor, M = Moderate, G = Good
General Observations and Comments: Comments relating to the tree'(s)' overall condition and any other pertinent factors including structural defects, current and potential direct structural damage, physiological decline, poor form, etc.
Management Recommendations: Either Preliminary or In Consideration of the Proposal - In the case of Arboricultural Constraints Surveys the recommended management works only take exiting site and tree circumstances and conditions into account and not proposed developments. Arboricultural Impact Assessment and Method Statement related Surveys take the proposed development into consideration with recommendations made accordingly. More than one option may be given if considered appropriate
ERC: Estimated Remaining Contribution - in years as per BS5837:2012 (i.e. <10, 10+, 20+, 40+)
Cat. Grade: Category Grading - tree retention value listed as U, A, B or C - in accordance with BS5837:2012 Table 1
RPA m²: Root Protection Area in m² - calculated area around the tree that must be appropriately protected throughout the development process in order avoid root damage
RPA Radius (m): Root Protection Area Radius - in metres measured from the centre of the stem to the line of tree protection
 # (Estimated Dimensions): Where trees are located off-site, or are inaccessible for any other reason, and accurate measurements or other information cannot be taken then the information provided is estimated and is duly suffixed with a "#" symbol

TREE SURVEY SCHEDULE FOR ARBORICULTURAL IMPACT APPRAISAL		Surveyor:	Jennie Keighley PhD MSc MArborA	Page: 2 of 4
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No.	Species	Height	Stem Diam.	Branch Spread		Branch & Canopy Clearances	Life Stage	PC	General Observations and Comments	Management Recommendations	ERC	Cat. Grade	RPA (m²)	RPA Radius (m)
T5	Horse Chestnut	22	800	N E S W	7 5 9 10	2-W 2	M	G	▪ Evidently growing in/on a mound of made ground. ▪ Vertical, almost fully occluded helical wound runs from base to a height of approximately 13m. ▪ Suspected hazard beam crack developing on top of 350mm diameter primary branch that extends south-west at a height of 2m (unable to view in detail from ground level). ▪ Crown heavily biased west.	▪ Retain in context of proposed development. ▪ Protect RPA throughout development using Temporary Protective Fencing to form a CEZ.	10+	C1/2	290	9.6
T6	Sycamore	20	620	N E S W	8 7 5 6	3-N 4	M	G	▪ Very heavy ivy to upper crown significantly impedes inspection. ▪ Slight stem lean north with associated basal flaring on southern side.	▪ Retain in context of proposed development. ▪ Protect RPA throughout development using Temporary Protective Fencing to form a CEZ. ▪ Sever ivy at base and at a height of 1.5m and remove section in between.	20+	B1	174	7.44
T7	Sycamore	19	580	N E S W	6 6 8 6	5-SE 3	M	G	▪ Heavy ivy to upper crown significantly impedes inspection. ▪ Very slight stem lean south.	▪ Retain in context of proposed development. ▪ Protect RPA throughout development using Temporary Protective Fencing to form a CEZ. ▪ Sever ivy at base and at a height of 1.5m and remove section in between.	20+	B1	152	6.96
T8	Sycamore	16.5	720	N E S W	8 5 10 9	4-N 3	M	G	▪ Approximately ten unoccluded and partially occluded pruning wounds in lower crown to a diameter of 300mm, evidently from two separate crown lifts in recent years. ▪ Crown moderately biased south and west.	▪ Remove in order to construct development as proposed.	20+	B1	235	8.64
T9	Horse Chestnut	13	720	N E S W	7 7 7 7	2-N 2	M	G	▪ Brash piled around south-western side of base. ▪ Numerous pruning wounds in lower crown with long stubs left.	▪ Retain in context of proposed development. ▪ Protect RPA throughout development using Temporary Protective Fencing to form a CEZ.	20+	B1	235	8.64
T10	Common Lime	14	490	N E S W	6 5 6 6	4-S 3	M	G	▪ Brash piled around western side of base. ▪ Crown lifted in past, wounds fully occluded.	▪ Retain in context of proposed development. ▪ Protect RPA throughout development using Temporary Protective Fencing to form a CEZ.	20+	B1	109	5.88
T11	Apple	7	1x260 1x230 (ts)	N E S W	3.5 3.5 3.5 3.5	2.5-NE 2	M	M	▪ Severe stem lean east. ▪ Two leaders removed at a height of 1.5m. ▪ Crown reduced. ▪ Limited remaining life expectancy.	▪ Remove in context of site landscaping.	<10	U	55	4.17
T12	Elm	16	710	N E S W	7 7 6 6	5-N 4	M	G	▪ Located in neighbouring garden, outside proposed development boundary. ▪ Trifrucates at a height of 2m with acutely tight forks. ▪ Crown lifted to a height of 5m.	▪ Retain in context of proposed development. ▪ Protect RPA throughout development using Temporary Protective Fencing to form a CEZ.	20+	B1	228	8.52

TREE SURVEY SCHEDULE FOR ARBORICULTURAL IMPACT APPRAISAL			
Site:	Land south of 39 Clitheroe Road, Whalley, Lancashire, BB7 9AD	**Surveyor:**	Jennie Keighley PhD MSc MArborA
Clients:	Mr & Mrs Bentley	**Survey Date:**	4 January 2018
		Job Reference:	BTC1492

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)
T13	Purple Plum	6	1x230 1x160 (ts)	N E S W	3 6 4 3	3-E 2	M	M	▪ Bifurcates near ground level. ▪ Eastern leader has severe lean east. ▪ Heavy ivy in crown has been severed and is dead. ▪ Limited remaining life expectancy.	▪ Remove in context of site landscaping.	<10	U	35	3.36
T14	Oak	18	1x510 1x490 (ts)	N E S W	8.5 8.5 8.5 8.5	1.5-W 3	M	G	▪ Located in neighbouring garden, outside proposed development boundary. ▪ Growing in rockery area, at level approximately 1m higher than site. ▪ Bifurcates at base. ▪ Crown lifted to a height of 4-5m. ▪ Frequent deadwood and branch tear wounds (including recent) throughout crown to a diameter of 50mm.	▪ Retain in context of proposed development. ▪ Protect RPA throughout development using Temporary Protective Fencing to form a CEZ.	20+	B1	226	8.49
T15	Beech	20	720	N E S W	7 8 11 7	5-S 4	M	G	▪ Located in neighbouring garden, outside proposed development boundary. ▪ Growing in rockery area, at level approximately 1m higher than site. ▪ Heavy ivy to upper crown significantly impedes inspection. ▪ Crown moderately biased south due to presence of neighbouring tree.	▪ Retain in context of proposed development. ▪ Protect RPA throughout development using Temporary Protective Fencing to form a CEZ. ▪ Sever ivy at base and at a height of 1.5m and remove section in between.	20+	B1/2	235	8.64
T16	Sycamore	21	620	N E S W	5 8 5 10	4-N&S 5	M	G	▪ Located in neighbouring garden, outside proposed development boundary. ▪ Growing in rockery area at level approximately 1m higher than site. ▪ Moderately heavy ivy to upper crown significantly impedes inspection.	▪ Retain in context of proposed development. ▪ Protect RPA throughout development using Temporary Protective Fencing to form a CEZ. ▪ Sever ivy at base and at a height of 1.5m and remove section in between.	20+	B1/2	174	7.44
G1	2no. Horse Chestnut, 1no. Copper Beech	≤ 22	≤ 830	N E S W	≤ 8 ≤ 8 ≤ 8 ≤ 10	3-NW ≥ 2	M	P	▪ Moderately spaced group. ▪ Historic and severe fire damage to all three trees, which now have advanced stem decay, including evidence of white rots, brown rots, and saprophytic fungi. ▪ Exposed decay columns on all three trees to heights of up to 6m. ▪ Irreparable damage projected to result in short remaining life expectancies.	▪ Remove due to short projected life expectancies.	<10	U	≤ 312	≤ 9.96
G2	10no. Plum, 1no. Apple	≤ 6	≤ 130	N E S W	≤ 2 ≤ 2 ≤ 2 ≤ 2	2-N ≥ 1	Y-EM	M/P	▪ Very closely spaced group growing as an orchard. ▪ All with varying degrees of stem leans or stem curvature.	▪ Retain in context of proposed development. ▪ Protect RPAs throughout development using Temporary Protective Fencing to form a CEZ.	10+	C1	≤ 8	≤ 1.56

TREE SURVEY SCHEDULE FOR ARBORICULTURAL IMPACT APPRAISAL		Surveyor:	Jennie Keighley PhD MSc MArborA	Page: 4 of 4
Site:	Land south of 39 Clitheroe Road, Whalley, Lancashire, BB7 9AD	Survey Date:	4 January 2018	
Clients:	Mr & Mrs Bentley	Job Reference:	BTC1492	

No.	Species	Height	Stem Diam.	Branch Spread	Branch & Canopy Clearances	Life Stage	PC	General Observations and Comments	Management Recommendations	ERC	Cat. Grade	RPA (m²)	RPA Radius (m)
G3	4no. Purple Plum	≤ 9	≤ 490	N ≤ 4.5 E ≤ 4.5 S ≤ 4.5 W ≤ 4.5	2-W ≥ 2	M	G	▪ Closely spaced linear group growing in neighbouring garden, outside proposed development boundary. ▪ Ivy on stems has been severed and is dead.	▪ Retain in context of proposed development. ▪ Protect RPAs throughout development using Temporary Protective Fencing to form a CEZ.	10+	C1	≤ 109	≤ 5.88
G4	Pine, Cypress, Cedar, Monkey Puzzle, Beech	≤ 24	≤ 750	N ≤ 12 E ≤ 12 S ≤ 12 W ≤ 12	1 ≥ 1	EM-M	G	▪ Growing in neighbouring garden, outside proposed development boundary. ▪ Moderately spaced roughly linear group of mixed conifers growing in rockery area at level approximately 2m higher than site.	▪ Growing outside proposed development area and not projected to be impacted.	40+	A2	≤ 254	≤ 9
H1	Thuja	≤ 10	≤ 200#	≤ 4 wide	N/A 0	SM	G	▪ Unmanaged boundary hedge. ▪ Topped in past at various heights.	▪ Remove in full and replace with native Hawthorn hedge, as indicated on Planting Proposals plan by Rycroft Associates.	10+	C2	N/A	≤ 2.4
H2	Hawthorn	≤ 2	≤ 9x20 (ms)#	≤ wide	N/A 0	SM	G	▪ Managed boundary hedge. ▪ Covered in ivy.	▪ Retain in context of proposed development. ▪ Ensure protection throughout development.	10+	C2	N/A	≤ 0.72
H3	Leyland Cypress	≤ 1.5	≤ 50#	≤ 1 wide	N/A 0	Y	G	▪ Very young boundary hedge planted at road frontage.	▪ Remove in context of site landscaping.	10+	C2	N/A	≤ 0.6

BS5837:2012 Table 1 – Cascade Chart for Tree Quality Assessment

Category and definition	Criteria (including subcategories where appropriate)			Identification on plan
Trees unsuitable for retention (see Note)				
Category U Those in such a condition that they cannot realistically be retained as living trees in the context of the current land use for longer than 10 years	▪ Trees that have a serious, irremediable, structural defect, such that their early loss is expected due to collapse, including those that will become unviable after removal of other category U trees (e.g. where, for whatever reason, the loss of companion shelter cannot be mitigated by pruning) ▪ Trees that are dead or are showing signs of significant, immediate, and irreversible overall decline ▪ Trees infected with pathogens of significance to the health and/or safety of other trees nearby, or very low quality trees suppressing adjacent trees of better quality *Note: Category U trees can have existing or potential conservation value which it might be desirable to preserve; see BS5837:2012 paragraph 4.5.7.*			Red
	1. Mainly arboricultural qualities	**2. Mainly landscape qualities**	**3. Mainly cultural values, including conservation**	
Trees to be considered for retention				
Category A **Trees of high quality** with an estimated remaining life expectancy of at least 40 years	Trees that are particularly good examples of their species, especially if rare or unusual; or those that are essential components of groups or formal or semi-formal arboricultural features (e.g. the dominant and/or principal trees within an avenue)	Trees, groups or woodlands of particular visual importance as arboricultural and/or landscape features	Trees, groups or woodlands of significant conservation, historical, commemorative or other value (e.g. veteran trees or wood-pasture)	Green
Category B Those of moderate quality and value: those in such a condition as to make a significant contribution. A minimum of 20 years is suggested.	Trees that might be included in the high category, but are downgraded because of impaired condition. Examples include the presence of remediable defects including unsympathetic past management and minor storm damage	Trees present in numbers, usually as groups or woodlands, so they form distinct landscape features which attract a higher collective rating than they might as individuals. But which are not, individually, essential components of formal or semi-formal arboricultural features. For example, trees of moderate quality within an avenue that includes better, A category specimens. Or trees which are internal to the site, therefore individually having little visual impact on the wider locality	Trees with clearly identifiable conservation or other cultural benefits	Blue
Category C Those trees of low quality and value: currently in adequate condition to remain until new planting could be established - a minimum of 10 years is suggested - or young trees with a stem diameter below 150 mm	Trees not qualifying in higher categories	Trees present in groups or woodlands, but without this conferring on them significantly greater landscape value, and/or trees offering low or only temporary screening benefit	Trees with very limited conservation or other cultural benefits	Grey
	Note – Whilst C category trees will usually not be retained where they would impose a significant constraint on development, young trees with a stem diameter of less than 150mm should be considered for relocation			

- TEMPORARY PROTECTIVE FENCING & GROUND PROTECTION SPECIFICATION -

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

1. be constructed as in accordance with the Type 1, Type 2 or Type 3 'Temporary Protective Fencing Construction' sections and, where applicable the 'Temporary Ground Protection Measures' section, as detailed herein and agreed, in advance with the LPA;
2. be retained in place throughout the development process until completion of the project, and only removed following receipt of written permission from the LPA;
3. be sited in the area(s) defined by the Root Protection Areas on the associated Tree Impact Plan, or as the CEZs on the Tree Protection Plan;
4. be erected prior to any construction, demolition or excavation works and remain in place for the duration of the project;
5. preclude any delivery of site accommodation and/or materials and/or plant machinery;
6. 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;
7. preclude the storage of all development related materials and substances including fuels, oils, additives, cement and/or any other deleterious substance; and
8. be affixed with a 600mm x 300mm warning sign reading "TREE PROTECTION AREA KEEP OUT" (see Figure 1, below), at every 10.0 metre length of protective fencing.
9. Important: Any incursion into CEZs must be by prior arrangement, following consultation with the LPA.

Figure 1: CEZ Warning Sign

– TREE PROTECTION AREA –
KEEP OUT!

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

THE FOLLOWING MUST BE OBSERVED BY ALL PERSONNEL:

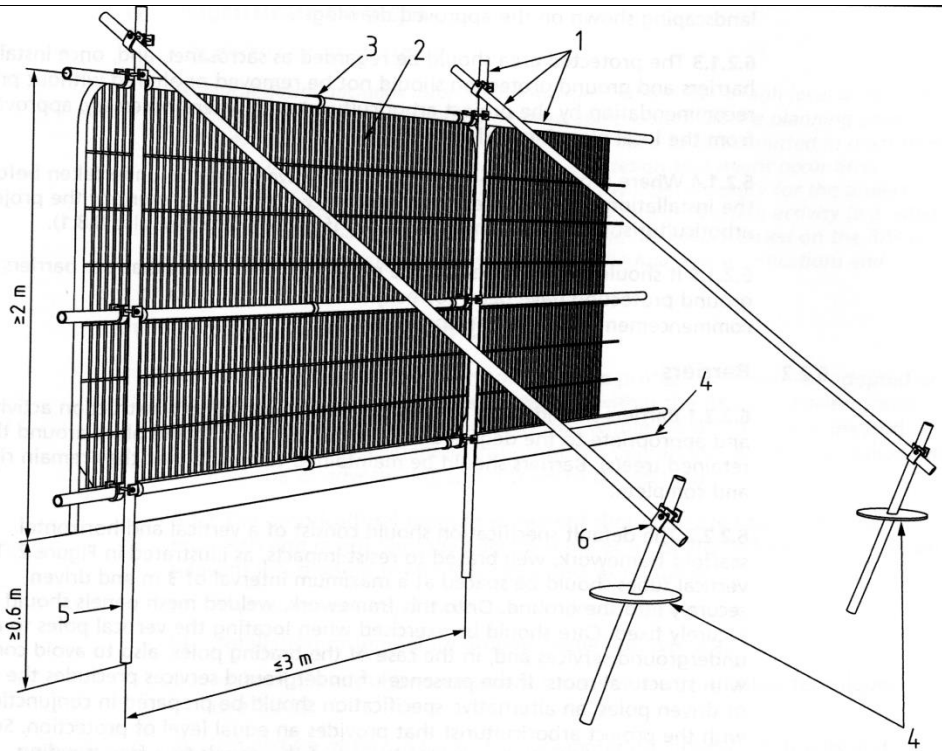
- THE PROTECTIVE FENCING MUST NOT BE MOVED
- NO PERSON SHALL ENTER THE CONSTRUCTION EXCLUSION ZONE
- NO MACHINE, PLANT OR VEHICLES SHALL ENTER THE EXCLUSION ZONE
- NO MATERIALS SHALL BE STORED IN THE EXCLUSION ZONE
- NO SPOIL SHALL BE DEPOSITED IN THE EXCLUSION ZONE
- NO EXCAVATION SHALL OCCUR IN THE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

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

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

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

Figure 2: BS5837:2012 Default specification for protective barrier



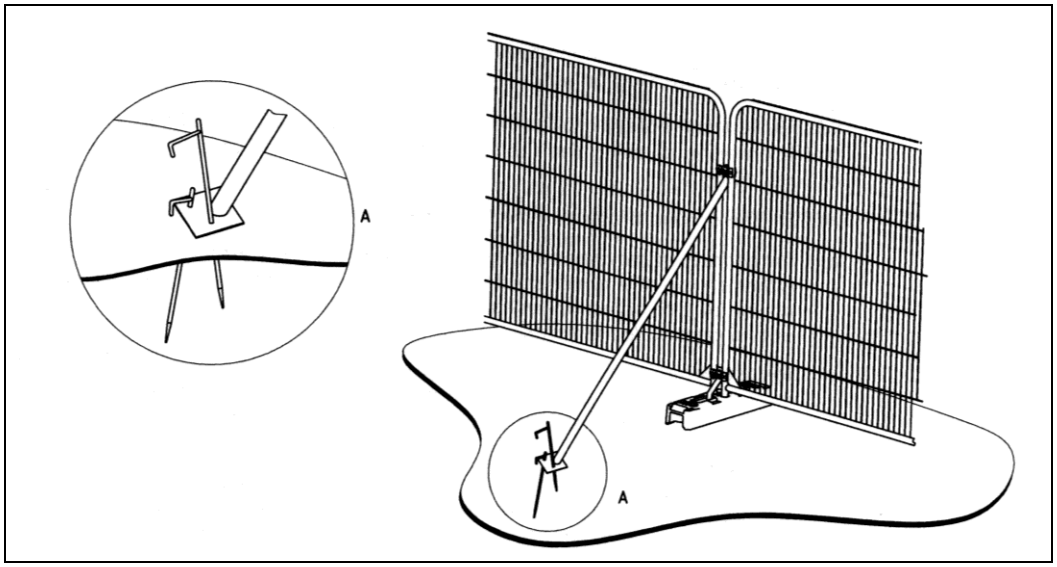
Key

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

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

1. Temporary protective fencing panels shall be weldmesh "Heras" panels of at least 2.0 metres in height.
2. The panels shall stand on rubber or concrete feet.
3. The panels shall butt together, and be joined together using a minimum of two anti-tamper couplers, installed so that they can only be removed from inside the fence.
4. The distance between the fence couplers shall be at least 1.0 metre, and shall be uniform throughout the fence.
5. The panels shall be supported on the inner side by stabiliser struts, which shall be clamped to the scaffold framework at a 45º angle and extend back into the CEZ and shall be attached to a base plate, which shall be secured to the ground with pins (Figure 3a).
6. No fixing shall be made to any tree and all possible precautions shall be taken to prevent damage to tree roots when locating posts.
7. A 600mm x 300mm warning sign reading "TREE PROTECTION AREA KEEP OUT" (see Figure 1) shall be fixed to every 10.0 metre length of protective fencing.
8. On completion of erection, and prior to any demolition or construction works, site preparation, excavation or delivery of plant and materials, the Consulting Arboriculturist or the LPA Tree Officer, as agreed, shall inspect the Temporary Protective Fencing.

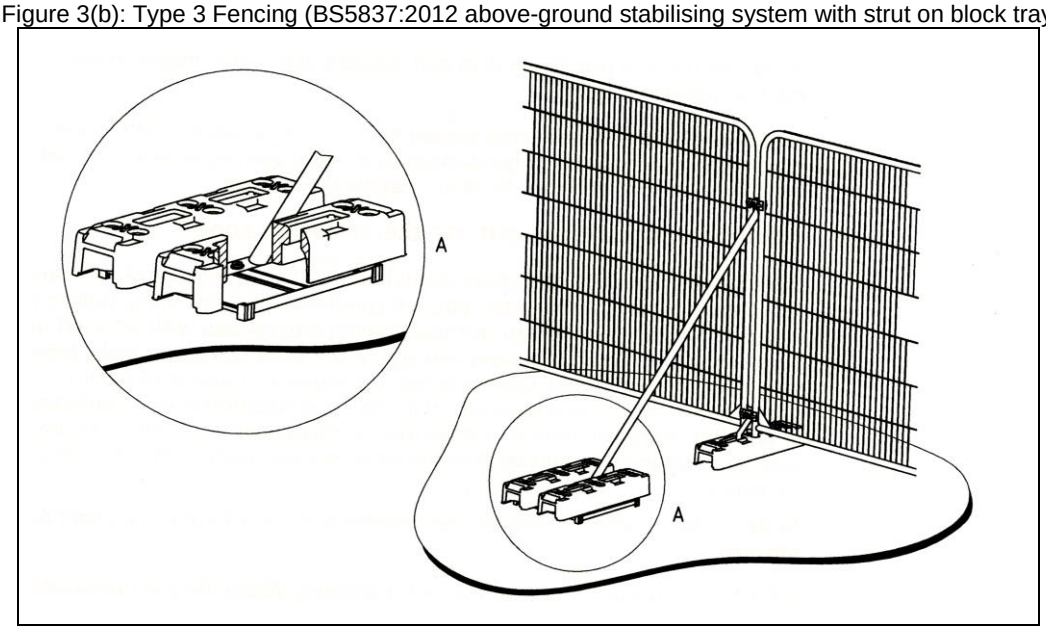
Figure 3(a): Type 2 Fencing (BS5837:2012 above-ground strut stabilising system with ground pins)



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

1. Temporary protective fencing panels shall be weldmesh "Heras" panels of at least 2.0 metres in height.
2. The panels shall stand on rubber or concrete feet.
3. The panels shall butt together, and be joined together using a minimum of two anti-tamper couplers, installed so that they can only be removed from inside the fence.
4. The distance between the fence couplers shall be at least 1.0 metre, and shall be uniform throughout the fence.
5. The panels shall be supported on the inner side by stabiliser struts, which shall be clamped to the scaffold framework at a 45º angle and extend back into the CEZ and shall be attached to a block tray base (Figure 3b).
6. No fixing shall be made to any tree and all possible precautions shall be taken to prevent damage to tree roots when locating posts.
7. A 600mm x 300mm warning sign reading "TREE PROTECTION AREA KEEP OUT" (see Figure 1) shall be fixed to every 10.0 metre length of protective fencing.
8. On completion of erection, and prior to any demolition or construction works, site preparation, excavation or delivery of plant and materials, the Consulting Arboriculturist or the LPA Tree Officer, as agreed, shall inspect the Temporary Protective Fencing.

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



Temporary Ground Protection

1. Any necessary Temporary Ground Protection areas shall conform to Figure 4, 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 4: Temporary Ground Protection – Recommended Construction

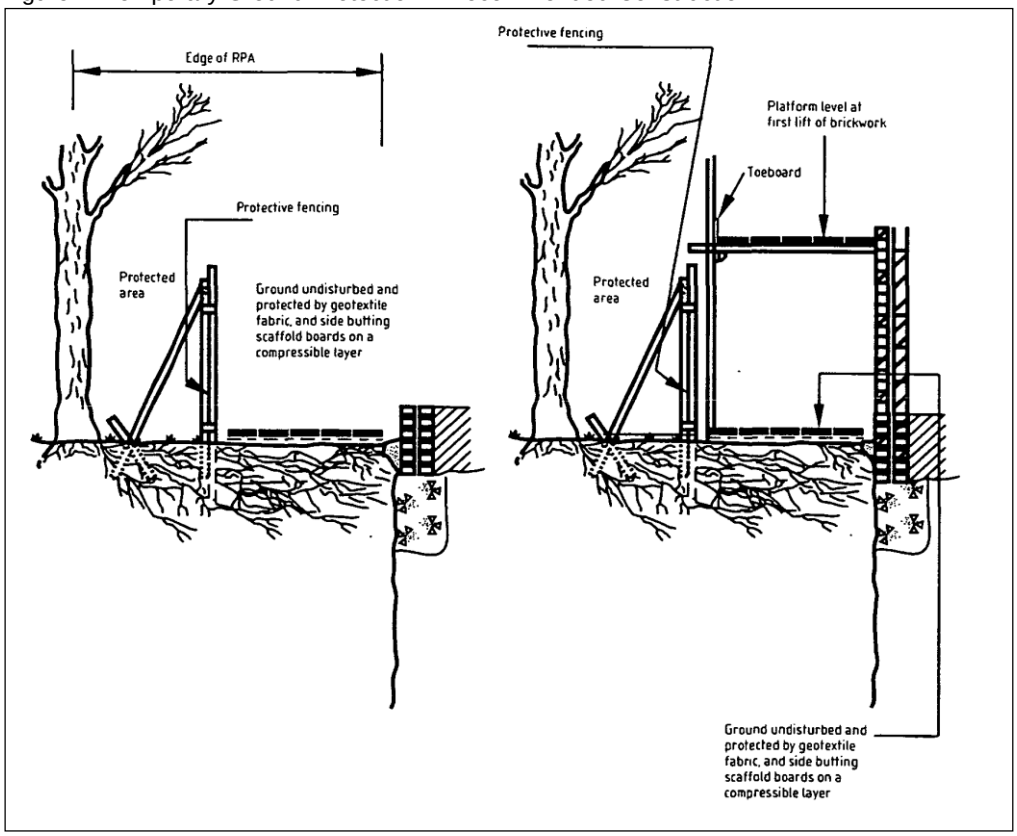


Photo 1: In neighbouring garden, looking east. Tree T15, shown on right, is located in neighbouring rockery, approximately 1m higher than site level, which is projected to be dictating the tree's rooting morphology

RPA of tree T15 shown reduced by one third to represent degree of root encroachment into site, which is projected to be significantly reduced by tree's location in neighbouring rockery garden at a height 1m higher than site (see Photo 1)

Hedge H1 to be removed in full and replaced with native Hawthorn hedge, as indicated on Planting Proposals plan by Rycroft Associates

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

KEY

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

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

Tree Categorisations:

Those to be Considered for Retention:

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

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

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

Those Considered Unsuitable for Retention:

Category 'U' Tree/Group/Hedge
Those in Such a Condition that they Cannot Realistically be Retained as Living Trees in the Context of the Current Land Use for Longer Than 10 Years

Note 1: The stem locations of trees T12, T13, T14 and T16 and groups G3 and G4 were not included on the topographical site plan provided and 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, their locations cannot therefore be considered to be exact, and this should be taken into consideration when planning for tree retention within the context of the design proposals
Note 2: Trees with their identification numbers labelled in grey are recommended for removal in the context of the development

Root Protection Areas (RPAs):

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

Project:
LAND SOUTH OF
39 CLITHEROE ROAD
WHALLEY
LANCASHIRE
BB7 9AD

Clients:
MR & MRS BENTLEY

Title:
TREE IMPACT PLAN
In Relation to Proposal to Construct Single Detached Dwelling

Scale:	1:250@A2
Date:	May 2018
Drawn by:	JK
Checked by:	PH

Bowland Tree Consultancy Ltd
e: info@bowlandtreeconsultancy.co.uk
t: 01772 437150

Ref: BTC1492-TIP Rev:

This drawing is to be read in conjunction with all relevant Architect, consultants' and specialists' drawings and specifications. The Architect is to be notified of any discrepancies before proceeding. Do not scale from this drawing. All dimensions and levels are to be checked on site. This drawing is subject to copyright. All work carried out before Planning and Building Permission has been granted is at the contractor/clients risk.

N
W (EVENING)
E (MORNING)
S (MIDDAY)

KEY

- Existing trees retained
- Proposed trees
- Proposed Trees standard sized
- Lawn
- Proposed bulb and wildflower zones
- Existing Hedge
- Proposed hedging

LAND ADJACENT TO 39 CLITHEROE ROAD

PLANTING SCHEDULE
May 2018

No	Code			
		TREES		
2	ALR	Amelanchier lamarckii Robin Hill	Heavy Standard 12-14cm stem	OG Short Stake
1	BJ	Betula jaquemontii	Multi stemmed Min 5 stems 4.0-4.5m high bushy	RB Underground Guy
1	CS	Castanea sativa Albomarginata	Adv. Nursery Stock 18-20cm stem	RB UG
1	IA	Ilex aquifolium	Standard 2.5-3.0m 8-10cm stem	RB/CG
1	LS	Liquidambar styraciflua	Heavy Standard 12-14cm stem	RB Short Stake
1	PST	Prunus serrula Tibetica	Multi stemmed, 4.5 - 5.0m Min stems	RB UG
1	PS	Pinus sylvestris	3.0-3.5m	RB UG
2	PSA	Prunus subhirtella Autumnalis	Multi stemmed 3.0-3.5m	CG Angled stake
1	QR	Quercus robur	Extra Heavy Standard 14-16cm stem	RB UG
		HEDGING		
400		Mixed Native Hawthorn Hedge		
25		80% Crategus monogyna	Feathered Whip 1.5-1.75m	Planted in staggered Row @ 300mm centres
25		5% Acer campestre	Feathered Whip 1.5-1.75m	
25		5% Prunus avium	Feathered Whip 1.5-1.75m	
25		5% Ilex aquifolium	10 litre CG 800-1000mm	
		5% Prunus spinose	Feathered 1+2 900-1200mm	

rycroft associates
20 Dartmouth Road Chorlton Manchester M21 8XJ
T 0161 8819430 F 0161 374 6872
E sarah@rycroftassociates.co.uk
W www.rycroftassociates.co.uk
landscape architects

Project.

Proposed New Dwelling at Land Adjacent to 39 Clitheroe Road, Whalley

Drawing.

PLANTING PROPOSALS

Drawing No.	Scale.	Date.
782.1C	1 . 200 @ A1	03.05. 2108