Arboricultural Impact Assessment

in Relation to Proposed Conversion of Existing Farm Buildings to Residential Usage of 8 Units at



Brockhall Farm, Old Langho, Lancashire, BB6 8BB

Prepared by: Bowland C Tree Consultancy Ltd

February 2021

ARBORICULTURAL IMPACT ASSESSMENT BROCKHALL FARM, OLD LANGHO

Control sheet

Project No.:	BTC2038
Site:	Brockhall Farm, Old Langho, Lancashire, BB6 8BB
Client:	Christopher Willan
Council:	Ribble Valley Borough Council
Survey Date:	6 August 2020
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DISCLAIMER

Survey Limitations: Unless otherwise stated all trees are surveyed from ground level using noninvasive 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. For these reasons the tree assessment advice only remains valid for one year from the date that the trees were last inspected.

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 BROCKHALL FARM, OLD LANGHO

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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 existing and proposed site plans to produce a Tree Constraints Plan and a Tree Impact Plan, identifying tree retention categories, crown spreads, Root Protection Areas, projected tree related impacts, trees proposed for retention, 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(s);
 - 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 commenting on suitable compensation and 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, it provides an initial analysis of the impacts that the proposed development is projected to have on trees located within the site and, where practicable, on immediately adjacent land. It also offers guidance on suitable retained tree management and compensation for projected losses, along with advice on appropriate tree protection measures in accordance with current guidance in the context of the proposals.

Site Visit, Data Collection and Tree Plans

- 1.3 Further to the instruction it is confirmed that a tree survey was carried out on 6 August 2020, 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 eleven individual trees (prefixed 'T') and fourteen groups of trees (prefixed 'G'), one woodland (prefixed 'W') and six hedges (prefixed 'H'), which have been numbered accordingly on the Tree Constraints Plan (TCP) and the Tree Impact Plan (TIP), as appended. The plans, which together detail the existing and readily definable tree constraints along with an overlay of the development proposals and the projected impacts, are based on the local ordinance survey plan and the proposed site plan, which were provided in electronic format by the agent. In turn, for the purpose of this report, it is presumed that the provided plans' details are accurate and up to date.
- 1.5 In this respect the TCP details the existing site with the readily definable tree constraints, whilst the purpose of the TIP is to give an initial indication of the impacts that the proposed development is projected to have on trees. This 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 and 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 Ribble Valley Borough Council planning department website, the site does not stand within a Conservation Area. However, the website details one group of trees (group G7, which lists 52 Limes, 18 Cherries and one Oak), which is located on neighbouring land adjacent to the farm access road, as protected by the Brockhall Hospital TPO no. 3 (1988). It is noted that this group includes the Limes and Oaks within surveyed groups G6 to G13 included in this report. As such, it would be necessary to obtain consent from the LPA prior to scheduling or carrying out any tree works to these trees that are not directly related to 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 & Species Regulations 2010 (as amended). In this respect it is 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 subsequently 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.
- 2.5 In turn, any subsequent works carried out in relation to any protected species must be carried out under guidance from a suitably qualified and experienced ecologist and in strict accordance with the guidance provided in BS42020:2013 Biodiversity Code of Practice for Planning and Development and, with regard to bats, in strict accordance with BS8596:2015 Surveying for Bats in Trees and Woodlands.

Felling Licences

2.6 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 a currently redundant farm yard consisting of a number of brick, concrete and steel agricultural buildings, as well as various areas of concrete and stone hard surfacing associated with the site's former use (see TCP).
- 3.2 As also detailed on the TCP the site application boundary also includes the existing unadopted farm access roadway between Lark Hill to the south and the farmyard to the north, as well as a short section of Lark Hill itself between the private farm access roadway and Old Langho Road.
- 3.3 In this respect it is noted that that the farm access roadway is a long established and maintained compacted stone hard surface which runs between Lark Hill Cottages to the south and the farmyard itself to the north. In turn, to the south-east of Lark Hill Cottages, the unadopted roadway becomes a sealed macadam hard surface before joining Lark Hill, which itself is a sealed macadam road.
- 3.4 It is understood, from information provided by the client, that the existing access roadway was used daily by heavy goods vehicles delivering bulk animal feed and collecting milk and also by large tractors and machinery, including high sided silage trailers, as part of the farming operations. During the tree survey it was also noted that large refuse collection vehicles regularly access the lower section of the access route serving Lark Hill and Lark Hill Cottages, thereby passing below the canopies of the trees located along this part of the access route.
- 3.5 The main farmyard site is bordered to the north, east and west by agricultural farmland, to the north-east by an established woodland on a steep bank down to the River Ribble, and to the south by an existing farm house and bungalow which are under client's ownership (see TCP).
- 3.6 The southern section of the farm access is bordered to the west by neighbouring residential properties and their associated private gardens and to the east by farmland, both owned by the client and under third party ownership. There is also a maintained grass verge running along the western edge of the access roadway adjacent to the rear of the residential properties, and there a various trees located within neighbouring areas of land to the west of the southern section of the access roadway.
- 3.7 No site levels were indicated on the Ordnance Survey plan provided.

4.0 THE TREE POPULATION

- 4.1 As noted previously, a total of eleven individual trees, fourteen groups of trees, one woodland, and six hedges were surveyed for the purpose of this appraisal. They range from young to mature in age, with heights up to approximately 25 metres, maximum diametrical crown spreads up to approximately 18 metres, and stem diameters up to approximately 1050 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 development proposals into account. However, recommendations for works included in the TSS take both current site usage and the proposed development into consideration where there are definable 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'.

As detailed in Table A, below, four trees, 11 groups and one woodland were categorised as 4.4 moderate quality (i.e. 'B' category), four trees, three groups and six hedges were categorised as low quality (i.e. 'C' category), and three trees were classed as unsuitable for long term retention (i.e. 'U' category) regardless of the development proposals.

	Ret. Cats.	Tree/Group/Woodland Numbers	Totals
	'A'	-	-
Those of a moderate or high quality that should be afforded appropriate consideration in the context of development	'B'	T1*, T5*, T9, T10, G1*, G3* G4*, G5*, G6*, G7*, G8*, G9*, G11*, G12*, G13*, W1	4 Trees 11 Groups 1 Woodland
Those of a low quality that should not be considered a material constraint to development	'C'	T2*, T6*, T7, T8*, G2*, G10*, G14* H1*, H2*, H3*, H4*, H5*, H6*	4 Trees 3 Groups 6 Hedges
Those that should be removed for sound management reasons regardless of site proposals	'U'	T3*, T4*, T11	3 Trees
			= 11 Trees, 14 Groups, 1 Woodland & 6 Hedges in Total

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

Note: Trees denoted with an asterisk are evidently located on, or partially on, neighbouring third-party owned land

5.0 THE DEVELOPMENT PROPOSAL AND ITS PROJECTED ARBORICULTURAL IMPACTS

The Development Proposal

- 5.1 As indicated on the proposed site plan, as provided by the project architects Zara Moon, and on the appended TIP, the proposal is for the conversion of the existing main central farm building into eight units for residential usage, with the demolition of various surrounding structures and their replacement with new garage buildings, a bike store, a communal energy hub and an outdoor store, along with associated landscaping.
- 5.2 As also detailed on the TIP the vehicular access is proposed via the existing farm access roadway from Old Langho Road which is to connect with the proposed parking and turning areas adjacent to the buildings. In this respect it is noted that, according to information provided by the project architects, there are no material changes proposed to the existing access roadway other than the addition of three passing places to the north-east of the existing road within the area of open farmland that is owned by the client.

Projected Arboricultural Losses and Impacts Relating to the Proposals

- 5.3 It is projected that the proposals can be implemented without necessitating the removal of any of the surveyed trees.
- 5.4 Nonetheless, as aforementioned, the canopies of a number of trees that are located on various areas of neighbouring privately owned land partially overhang the southern section of the access route (see TIP). As such, whilst not essential it would be prudent for the long term protection of the trees under consideration, regardless of the development proposals, to

undertake pruning works to raise their canopies to the standard highways clearance of approximately 5.05 metres height where they hang directly over the access roadway. As the trees are located on third party land however, it will be essential to notify the relevant tree owners of the proposals prior to any pruning works being undertaken.

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

- 5.5 Whilst there are no projected arboricultural losses as part of the development it is evident that the development can accommodate the provision of a substantial number of new trees and shrubs as part of the site's landscaping scheme, as indicated on the TIP.
- 5.6 Consequently, specific details regarding new tree planting should be prepared by a suitably qualified and experienced landscape architect in accordance with the guidance listed herein at paragraphs 7.5 and 7.6.
- 5.7 In turn, the provision of new tree, shrub and hedge planting as a component of site landscaping, and in agreement with the LPA, can be assured through the imposition of a suitably worded condition attached to a planning approval.

Special Design, Materials & Working Methods for Construction close to Retained Trees

- 5.8 The appraisal identified that the demolition of the piggery building is proposed in close proximity to the RPA and canopy spread of retained tree T10, as detailed on the TIP and at Table C, below. Nonetheless, it should be noted that such works are permissible under current government guidance (i.e. BS5837:2012) providing that they are planned and implemented whilst affording a suitable level of protection to the tree in question, such as through the use of appropriate hand-held tools, retaining existing ground levels within the trees' RPAs, and using designs that avoid localised ground compaction and root damage.
- 5.9 As such, it will subsequently be necessary to ensure that the trees under consideration are suitably protected in strict accordance with current government guidance through the use of special working, construction and protection measures, specific details of which are given in Table C, below.
- 5.10 As detailed in Table C, it is also recommended that any large vehicles accessing the site are supervised by a banksman when passing beneath and adjacent to the canopies of various trees that are located on neighbouring land in order to prevent contact and any associated subsequent damage.

Element of Proposal with Potential to Impact Upon Retained Trees	Applicable Trees	Proposed Specialist Working and Construction Methods	Relevant BS5837 Section(s) to be Adhered to	Information Required and Relevant Specialist
Demolition of existing structure and removal of hard surfacing	T10	 Building demolition to take place from within footprint of existing building where adjacent to canopy spread and RPA and on areas of existing hard standing. All site operations involving plant with booms, jibs and counterweights to be planned in advance to prevent contact with retained trees, and works adjacent to trees conducted under supervision of a banksman and under arboricultural direction to ensure that adequate clearances from retained trees are maintained. 	7.3	Demolition contractor to provide method statement for demolition of building adjacent to T10

Table C: Elements of Proposal with Potential to Impact Upon Trees and Subsequent Specialist Working Methods

Element of Proposal with Potential to Impact Upon Retained Trees	Applicable Trees	Proposed Specialist Working and Construction Methods	Relevant BS5837 Section(s) to be Adhered to	Information Required and Relevant Specialist
Installation of proposed boundary treatment and area of new hard surfacing	T10	 Boundary treatment and hard surfacing to new courtyard to be installed using hand working methods and working from within the curtilage of the existing farmyard to the west. 	7.2	Building contractor to provide details of installation of boundary treatment adjacent to T10
Oversized vehicles accessing site in close proximity to canopy spreads and RPAs	T1, T5, T6, T9 G5 - G13	 Oversized vehicles arriving on site to deliver material and/or machinery/ equipment to be supervised by banksman where passing below and adjacent to tree canopies. No vehicular access onto soft surfaces adjacent to access. 	6.2.4	Site manager to ensure all vehicles making deliveries to site are informed of specific access arrangements relating to tree protection.

- 5.11 In addition to the above it is also recommended that, in order to avoid above ground tree damage during construction works, inclusive of use of the site access route, all on site operations involving plant with booms, jibs and counterweights are to be planned in advance under arboricultural direction, with all such operations to be carried out in close proximity to trees to be conducted under the supervision of a banksman.
- 5.12 Consequently, in order to ensure adequate protection of retained trees, then special materials and working methods for proposed construction within RPAs, including the construction of the utility unit as aforementioned, should be included in a suitably detailed site and development specific Arboricultural Method Statement and Tree Protection Plan, the provision of which and adherence to can be conditioned to a planning permission (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 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 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 To date, no service plan showing proposed service and/or drainage runs has been provided in respect of the development under consideration. However, the proposed site plan indicates that, if correctly planned, there should be sufficient space to run the services and drainage outside the RPAs of retained trees for most of the units. Nonetheless, if it is subsequently identified to be necessary to route service and/or drainage runs within RPAs then details regarding any such ground works can 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.

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 nondevelopment 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. CA and/or TPO protection).

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.

Landscaping Within and Close to Retained Trees' RPAs

7.6 Any landscaping carried out within and close to retained trees' RPAs should be carried out in strict accordance with the guidance detailed in section 8 of BS5837:2012. As is the case with 7.5, above, a requirement for these works to conform with the current guidance detailed in BS5837:2012 can be conditioned to a planning approval.

Retained Tree Management

- 7.7 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.
- 7.8 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 Eleven individual trees, fourteen groups of trees, one woodland and six hedges were surveyed in respect of a proposal to convert existing farm buildings for residential usage.
- 8.2 Four trees, eleven groups and one woodland were categorised as moderate quality, four trees, three groups and six hedges were categorised as low quality, and three trees were classed as unsuitable for long term retention regardless of the development proposals.
- 8.3 An appraisal of the proposal documentation provided to date identified that construction of the development as proposed will not require the removal of any of the surveyed trees. One tree is, however, proposed for removal due to poor physiological and structural condition.
- 8.4 Nonetheless, it is also noted that the proposed development has sufficient space to provide new tree and shrub planting as a component its landscaping scheme, the provision of which can be assured through the imposition of a suitably worded condition attached to a planning

approval.

- 8.5 Consequently, any new tree planting and any landscaping carried out within and close to retained trees' RPAs, should be carried out in strict accordance with current government guidance.
- 8.6 In addition to the above, an element of the proposed development related works has been identified to be adjacent to the RPA and canopy spread of one moderate quality tree and the access route has been identified to pass below and adjacent to retained tree canopies.
- 8.7 It is, however, noted that the proposals under consideration are permissible under current government guidance providing that the associated implementation works are planned and implemented whilst affording a suitable level of protection to the trees under consideration.
- 8.8 As such, it will subsequently be necessary to ensure that the trees under consideration are suitably protected in strict accordance with current government guidance through the use of special working, construction and protection measures, specific details of which are detailed herein.
- 8.9 Accordingly, in order to ensure adequate protection of retained trees, these measures 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.
- 8.10 Furthermore, it should also be noted that all site works must be carried out in strict accordance with any advice and recommendations made by the project ecologist where applicable and, in turn, in accordance with current government guidance relating to biodiversity, wildlife and development.

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.

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TREE SURVEY SCHEDULE FOR ARBORICULTURAL IMPACT ASSESSMENT Site: Brockhall Farm, Old Langho, Lancashire, BB6 8BB

Client: Christopher Willan

Surveyor:	Joseph Lambert BSc(Hons) FdSc MArborA	
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Branch & RPA Stem Branch Life Cat. RPA No. Species Height Canopy PC General Observations and Comments ERC Radius Management Recommendations Diam Spread Stage Grade (m²) Clearances (m) Located immediately adjacent to road in highway verge and Ν 8 considered to be under ownership of applicable highways E S 8 2-N authority. G T1 Common Oak 18 690 Μ 20 +B1 215 8.28 9.5 Wound of approximately 400mm height and 200mm diameter on 3 9.5 south side of main stem evidently from vehicle damage. W Not projected to be impacted by development proposals. Located on neighbouring land in grass verge adjacent to residential road. Ν 4 Canopy highly biased to west due to suppression by neighbouring E S 0.5 1.6-W T2 8 4.2 Plum 350 ΕM trees in aroup G1. 10 +C1 55 Μ 2 2 Multiple branches from a height of approximately 1.6m. W 6 Several rubbing and crossing branches within canopy. Not projected to be impacted by development proposals. Located on neighbouring land in grass verge adjacent to residential road. Recommend tree owner removes tree in 6 Ν Twin-stemmed from a height of approximately 1m with cupped 1x550 accordance with prudent arboricultural E S 6 1 1x320 Т3 17.5 Ρ <10 U 183 7.64 Common Ash Μ union. management practice due to 6 2 Canopy showing a significant reduction in vitality and severe twig (ts) colonisation by Ash Dieback Disease W 6 dieback due to colonisation by Ash Dieback Disease. and projected continued decline. Not projected to be impacted by development proposals. Located on neighbouring land in grass verge adjacent to residential road. Ganoderma sp. white rot decay causing fungal fruiting body at 4.5 Ν stem base. Recommend tree owner removes tree E S 0.5 Moderately severe stem lean to north from ground level. 2 Ρ Τ4 Plum 9 280 ΡM <10 U 35 3.36 due to evident structural condition and Stem bifurcates at a height of approximately 2m. 0 2 location adjacent to footpath and road. Dead stem arising to east from this point with number of white rot 1.5 W decay causing Phellinus pomaceus fungal fruiting bodies. Stem arising to west pruned at a height of approximately 4m. Not projected to be impacted by development proposals.

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 exiting site and tree circumstances and conditions into account and not proposed developments. Arboricultural Impact Assessment an	d 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 m ² :	Root Protection Årea in m ² - calculated area around the tree that must be appropriately protected throughout the development process in order avoid root damage	Powland (
RPA Radius (m):	Root Protection Area Radius - in metres measured from the centre of the stem to the line of tree protection	DUWIAIIU
# (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 Consultancy Lt

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No.	Species	Height	Stem Diam.		Branch Spread	Branch & Canopy Clearances	Life Stage	PC	General Observations and Comments	Management Recommendations		Cat. Grade	RPA (m²)	RPA Radius (m)
T5	Lawson Cypress	18	1x420 1x350 2x210 (ms)	N E S W	3 3 3 3	0 1.5	Μ	G	 Located on neighbouring land in grass verge adjacent to residential road. Multiple stems and branches arising at ground level. Several tight unions within upper canopy typical of species. 	 Banksman to supervise site deliveries made by oversized vehicles when passing tree's canopy to avoid damage. 	20+	B1	155	7.03
T6	Rowan	5	1x80 1x50 (ts)#	N E S W	1.5# 1.5 1.5# 1.5#	0.3 2	Y	G	 Located within neighbouring residential garden to west of track and, as such, not accessed to inspect in detail. Twin stemmed from ground level. 	 Banksman to supervise site deliveries made by oversized vehicles when passing tree's canopy to avoid damage. 	10+	C1	4	1.13
T7	Common Hawthorn	8	5x150 (ms)#	N E S W	4 4 4 4	0 0	М	G	 Located within agricultural field under client's ownership. Likely remnant of now lapsed field hedgerow. Dense canopy to ground restricted detailed inspection. 		10+	C1	51	4.02
Т8	Plum	4	75#	N E S W	2# 2# 2# 2#	N/A 2	Y	G	 Located to west of hedge and therefore understood to be on neighbouring land, which was not accessed to inspect in detail. Evidently a single stem with multiple basal shoots. Fouling sign and street light. 	•	10+	C1	3	0.9
Т9	Common Lime	13	740	N E S W	6.5 6.5 6.5 6.5	2-W 2	М	М	 Located within agricultural field under client's ownership. Basal growth partially restricted detailed inspection. Dense epicormic growth from a height of approximately 2m, which significantly restricted inspection of inner and upper canopy. Canopy has evidently retrenched. Upper canopy moderately sparse. RPA offset to west due to stone wall and adjacent access track with concrete edge. 	 Retain tree in context of proposed development. Ensure protection of RPA in accordance with appended temporary fencing specification. Prune tree to attain ground clearance of approximately 5m over access route. Banksman to supervise site deliveries made by oversized vehicles when passing tree's canopy to avoid damage. 	20+	B1	248	8.88

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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)
T10	Sycamore	18.5	570	N E S W	6 4 8.50 7	2.5 2	Μ	G	 Canopy biased to south-west due to neighbouring trees within woodland W1. Located on fence line with barbed wire stock fence grown into stem to height of approximately 1m. RPA reduced around existing brick building to south-west. 	 Retain tree in context of proposed development. Ensure protection of RPA in accordance with appended temporary fencing specification. Demolish adjacent building from within its footprint in strict accordance with section 7.3 of BS5837 (see Table C of AIA). Install proposed boundary treatment and hard surfacing to western extent of RPA using hand working methods from within curtilage of existing farmyard area. NB: Proposed encroachment is located to edge of previous farm yard, which is projected to have provided less favourable rooting conditions than that of surrounding open grass fields and wooded areas. 	20+	B1	147	6.84
T11	Common Horse Chestnut	17	1x750 1x420 (ts)	N E S W	6 6 7.5 7.5	0 2	М	M/P	 Substantial staining and areas of bark necrosis to main stem from ground level and continuing up into primary branches. Significant primary branch failure of approximately 450mm diameter to south at a height of approximately 5m, with evident decay and old fungal fruiting body partially visible within wound. Canopy showing a moderate reduction in vitality. 	 Remove tree due to poor structural and physiological condition. 	<10	U	335	10.32
G1	4no. Common Beech	≤ 22	≤ 850	N E S W	≤ 8.5 ≤ 8.5 ≤ 8.5 ≤ 8.5	N/A ≥ 2	М	G	 Located on neighbouring land in grass verge adjacent to residential road. Closely spaced linear group along boundary hedge. Several tight unions present within canopies Not projected to be impacted by proposed development. 		20+	B1	≤ 327	≤ 10.2
G2	1no. Copper Beech, 1no. Plum, 1no. Purple Plum, 1no. Privet, 1no. Sycamore	≤ 16	≤ 3x300 (ms)#	N E S W	≤ 4.5 ≤ 6.5 ≤ 6.5 ≤ 4.5	N/A ≥ 2	Y-M	M-G	 Located on neighbouring land in grass verge adjacent to residential road. Both Plums have evidently lost branches up to approximately 300mm diameter through failures and pruning, with evidence of past fungal decay fruiting bodies on lower main stems. Majority of group suppressed by larger trees to west. Not projected to be impacted by proposed development. 		10+	C1	≤ 122	≤ 6.24

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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)
G3	Common Ash, Common Oak	≤ 25	≤ 1050#	N E S W	≤ 12 ≤ 12 ≤ 12 ≤ 12 ≤ 12	N/A ≥ 2	Μ	G	 Located on neighbouring land and not accessed to inspect in detail. Edge of wider group extending west. Ash showing significant reduction in vitality and branch dieback extending into tertiary branches due to effects of colonisation by Ash Dieback Disease. Not projected to be impacted by proposed development. 	•	40+	B1/2	≤ 499	≤ 12.6
G4	1no. Purple Plum, 1no. Sycamore	≤ 17	≤ 550	NESW	≤ 6.5 ≤ 6.5 ≤ 6.5 ≤ 6.5	N/A ≥ 2	Μ	G	 Moderately spaced pair located on neighbouring land in grassed verge area adjacent to residential road. Not projected to be impacted by proposed development. 		20+	B1	≤ 137	≤ 6.6
G5	3no. Copper Beech	≤ 13.5	≤ 560	N E S W	≤ 6.5 ≤ 6.5 ≤ 6.5 ≤ 6.5	2-E ≥ 3	EM	G	 Moderately-closely spaced linear group located on neighbouring land in grass verge adjacent to residential road. Several pruning wounds up to approximately 120mm diameter from works to raise canopies over path and road. Staining on buttress root to south of tree to centre consistent with colonisation by bacterial pathogen <i>Phytophthora</i> sp. Cable laid over roots and partially buried and partially exposed above ground. 	 Prune canopies to attain a clearance of approximately 5.05m height over access route (see paragraph 5.4 and 5.5 of AIA). NB: Trees under third party ownership and as such, owner(s) should be notified prior to works. Banksman to supervise site deliveries made by oversized vehicles when passing tree's canopy to avoid damage. 	20+	B1/2	≤ 88	≤ 5.28
G6	1no. Common Beech, 1no. Common Lime, 1no. Horse Chestnut	≤ 15	≤ 650#	N E S W	≤ 5# ≤ 7.5 ≤ 6# ≤ 6#	2.5-N ≥ 2	Μ	M-G	 Closely spaced linear group on neighbouring land along drive and adjacent to electrical substation. Beech canopy showing a moderate reduction in vitality, possibly associated with electrical substation within RPA to west and associated potential root damage from installation. Basal growth and lower edges of canopy partially encroaching over access track to east. 	 Prune canopies to attain a clearance of approximately 5.05m height over access route (see paragraph 5.4 and 5.5 of AIA). NB: Trees under third party ownership and as such, owner should be notified prior to work. Banksman to supervise site deliveries made by oversized vehicles when passing tree's canopy to avoid damage. 	20+	B1/2	≤ 191	≤ 7.8
G7	2no. Common Lime, 1no. Horse Chestnut	≤ 17	≤ 480#	N E S W	≤ 5.5# ≤ 5.5 ≤ 5.5# ≤ 5.5#	4 ≥ 4	Μ	М	 Group located within neighbouring residential garden to west of track and, as such, not accessed to inspect in detail. Wound of approximately 150mm width on east side of main stem of Horse Chestnut between a height of approximately 1m to 2m and which has partly occluded partly occluded. Canopy showing a moderate reduction in vitality. 	 Prune canopies to attain a clearance of approximately 5.05m height over access route (see paragraph 5.4 and 5.5 of AIA). NB: Trees under third party ownership and as such, owner should be notified prior to work. Banksman to supervise site deliveries made by oversized vehicles when passing tree's canopy to avoid damage. 	20+	B1/2	≤ 104	≤ 5.76

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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)
G8	1no. Horse Chestnut, 1no. Lime	≤ 19	≤ 510#	N E S W	≤ 5# ≤ 5 ≤ 5# ≤ 5#	N/A ≥ 7.5	М	G	 Closely spaced pair located within neighbouring residential garden to west of track and, as such, not accessed to inspect in detail. 	 Prune canopies to attain a clearance of approximately 5.05m height over access route (see paragraph 5.4 and 5.5 of AIA). NB: Trees under third party ownership and as such, owner should be notified prior to work. Banksman to supervise site deliveries made by oversized vehicles when passing tree's canopy to avoid damage. 	20+	B1/2	≤ 118	≤ 6.12
G9	Horse Chestnut, Common Lime	⊻ 19	≤ 450#	N E S W	≤ 5# ≤ 5 ≤ 5# ≤ 5#	N/A ≥ 3.5	М	M-G	 Closely spaced group of eight trees located within two neighbouring residential garden to west of track and, as such, not accessed to inspect in detail. 	 Prune canopies to attain a clearance of approximately 5.05m height over access route (see paragraph 5.4 and 5.5 of AIA). NB: Trees under third party ownership and as such, owner should be notified prior to work. Banksman to supervise site deliveries made by oversized vehicles when passing tree's canopy to avoid damage. 	20+	B1/2	≤ 92	≤ 5.4
G10	1no. Horse Chestnut, 1no. Common Lime	⊻ 16	≤ 500#	N E S W	≤ 5# ≤ 5 ≤ 5# ≤ 5#	N/A ≥ 4	EM	М	 Group located within neighbouring residential garden to west of track and, as such, not accessed to inspect in detail. Canopy of Lime showing a slight reduction in vitality. Horse Chestnut has a large dysfunctional wood strip of approximately 250mm width on south of stem from ground level, with occluding tissues extending to a height of approximately 6m and spiralling around east to finish on north side of stem. Branch of approximately 160mm diameter arises to south-east at a height of approximately 4m adjacent to dysfunctional strip. 	 Prune canopies to attain a clearance of approximately 5.05m height over access route (see paragraph 5.4 and 5.5 of AIA). NB: Trees under third party ownership and as such, owner should be notified prior to work. Banksman to supervise site deliveries made by oversized vehicles when passing tree's canopy to avoid damage. 	10+	C1	≤ 113	≤ 6
G11	1no. Lime, 1no. Oak	≤ 18	≤ 600#	N E S W	≤ 5# ≤ 5 ≤ 5# ≤ 5#	N/A ≥ 5	М	M-G	 Group located within neighbouring residential gardens to west of track and, as such, not accessed to inspect in detail. Canopy of Oak to north showing a moderate reduction in vitality, and has had multiple lower branches up to approximately 150mm diameter pruned to raise canopy over garden. Moderate deadwood up to approximately 120mm diameter. 	 Prune canopies to attain a clearance of approximately 5.05m height over access route (see paragraph 5.4 and 5.5 of AIA). NB: Trees under third party ownership and as such, owner should be notified prior to work. Banksman to supervise site deliveries made by oversized vehicles when passing tree's canopy to avoid damage. 	20+	B1/2	≤ 163	≤ 7.2

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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)
G12	5no. Horse Chestnut, 1no. Lime	≤ 16	≤ 500#	N E S W	≤ 5# ≤ 6 ≤ 5# ≤ 5#	2.5-E ≥ 3	EM	M-G	 Group located within neighbouring residential gardens to west of track and, as such, not accessed to inspect in detail. Trees to south have a number of pruning wounds to lower canopies up to approximately 100mm diameter from pruning works to raise canopy. Horse Chestnut to centre has primary branch arising to east over track at a height of approximately 2.5m with 4m clearance between ground and branch at western edge of track. Tree to north has stain on east side possibly indicative of effects of colonisation by bacterial pathogen <i>Phytophthora</i> sp. 	 Prune canopies to attain a clearance of approximately 5.05m height over access route (see paragraph 5.4 and 5.5 of AIA). NB: Trees under third party ownership and as such, owner should be notified prior to work. Banksman to supervise site deliveries made by oversized vehicles when passing tree's canopy to avoid damage. 	20+	B1/2	≤ 113	≤ 6
G13	6no. Horse Chestnut, 6no. Lime	≤ 14	≤ 600#	N E S W	≤ 6# ≤ 6 ≤ 6# ≤ 4#	N/A ≥ 2.5	EM	M-G	 Group located within neighbouring residential gardens to west of track and, as such, not accessed to inspect in detail. Closely spaced linear group in broadly double row with Horse Chestnut to east and Lime to west. Occluded wound on branch of approximately 150mm diameter arising east over track at a height of approximately 4.5m Concrete post and wooden panel fence along eastern boundary of gardens with concrete gravel boards evidently set partly into ground. 	 Prune canopies to attain a clearance of approximately 5.05m height over access route (see paragraph 5.4 and 5.5 of AIA). NB: Trees under third party ownership and as such, owner should be notified prior to work. Banksman to supervise site deliveries made by oversized vehicles when passing tree's canopy to avoid damage. 	20+	B1/2	≤ 163	≤ 7.2
G14	1no. Alder, 1no. Norway Spruce	≤ 7	≤ 150#	N E S W	≤ 1.5 ≤ 1.5 ≤ 1.5 ≤ 1.5	N/A ≥ 2	SM	G	 Closely spaced pair in hedgerow and, as such, not able to access to inspect in detail. Ownership subsequently unclear. Not projected to be impacted by proposed development. 	•	10+	C1	≤ 10	≤ 1.8
W1	Ash, Beech, Oak	≤ 18	≤ 900	N E S W	≤ 9 ≤ 8 ≤ 9 ≤ 10	N/A ≥ 0	М	G-P	 Area of woodland bordering farmyard. Several trees showing moderate reductions in vitality. Located on very steep bank with large amounts of debris within and, as such, not accessed to inspect fully in detail. Many Ash within woodland are showing moderate to significant reductions in vitality and moderate to significant twig dieback associated with effects of colonisation by Ash Dieback Disease. Oak to east of farm outbuilding has evidently sustained failure of primary branch of approximately 450mm diameter in upper canopy on south side at a height of approximately 8m. 	 Retain woodland in context of proposed development. Ensure protection of RPA in accordance with appended temporary fencing specification. 	20+	B1/2/3	≤ 366	≤ 10.8
H1	Common Beech	≈ 2	N/A	1	≈ .2 wide	N/A 0	SM	G	 Managed hedge extending west. Not projected to be impacted by proposed development. 		10+	C1	N/A	≈ 1
H2	Privet	≈ 1.6	N/A	1	≈ .5 wide	N/A 0	SM	G	 Managed boundary hedge. Not projected to be impacted by proposed development. 		10+	C1	N/A	≈ 1

TREE SURVEY SCHEDULE FOR ARBORICULTURAL IMPACT ASSESSMENT Site: Brockhall Farm, Old Langho, Lancashire, BB6 8BB Client: Christopher Willan

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Branch & RPA RPA (m²) Stem Diam. Branch Life Cat. Height ERC No. Species Canopy PC **General Observations and Comments** Management Recommendations Radius Grade Spread Stage Clearances (m) N/A Managed boundary hedge within neighbouring garden. Cotoneaster. ≈ ≈ ≈ H3 Y-SM 10+ N/A G C1 N/A Lonicera, Privet 2 1.5 wide Not projected to be impacted by proposed development. 0 1 Length of managed hedge located in neighbouring garden. N/A ≈ ≈ ≈ Y-SM H4 Privet N/A G 10+ C1 N/A Not projected to be impacted by proposed development. 2 1.5 wide 0 1 Length of hedge evidently previously managed to a height of N/A ≈ ≈ ≈ H5 Y-SM G Common Beech N/A approximately 2m. 10+ C1 N/A 3 2 wide 0 1 Not projected to be impacted by proposed development. Hawthorn, Length of hedgerow managed at a height of approximately 1.5m. N/A ≈ ≈ ≈ H6 N/A Y-SM G Western Red 10+ C1 N/A 2 Not projected to be impacted by proposed development. 1 1.5 wide 0 Cedar



Category and definition	Criteria (including subcategories where app	ropriate)		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, st that will become unviable after removal of cannot be mitigated by pruning) Trees that are dead or are showing signs of Trees infected with pathogens of significar suppressing adjacent trees of better quality Note: Category U trees can have existing or po- 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	on		-							
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 Note – Whilst C category trees will usually not b trees with a stem diameter of less than 150mm	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 be retained where they would impose a significant of should be considered for relocation	Trees with very limited conservation or other cultural benefits constraint on development, young	Grey						

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

- 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;
- 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. <u>Important</u>: 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 <u>MUST</u> BE OBSERVED BY <u>ALL</u> 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 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) 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.



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 45° 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.



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 45° 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.













