Tree Protection Scheme

in Support of Discharge of Condition No. 21 of Planning Approval 2021/0147 for Residential Redevelopment of the Site and Erection of 4 no. Executive Style Dwellings and Associated Detached Garages at



Land off Crabtree Hurst, Lench Road, Waterfoot, Lancashire, BB4 7JH

> Prepared by: Bowland C Tree Consultancy Ltd

February 2024

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Unit Two 11 Cannon Street Preston Lancashire PR1 3NR

T: 01772 437150

Ground Floor 14 Castlegate Penrith Cumbria CA11 7HZ

T: 01768 744450

E: info@bowlandtreeconsultancy.co.uk

Bowland C Tree Consultancy Ltd

TREE PROTECTION SCHEME LAND OFF CRABTREE HURST, LENCH ROAD, WATERFOOT

PROJECT DETAILS

Project No.:	BTC2137
Site:	Land off Crabtree Hurst, Lench Road, Waterfoot, BB4 7JH
Client:	John Hardie
Council:	Rossendale Borough Council
Survey Date:	6 January 2021
Surveyed by:	
Prepared by:	Joseph Lambert BSc(Hons) FdSc MArborA MICFor
Checked by:	Phill Harris MSc BSc(Hons) HND MArborA CEnv MICFor
Date of Issue:	21 February 2024
Version No:	1



Condition No. 21:

Prior to the commencement of the development an Arboricultural Method Statement (AMS) and a Tree Protection Plan (TPP) shall be submitted to and approved in writing by the Local Planning Authority. The recommendations in paragraph 6 of the Arboricultural Impact Assessment and the Aboricultural Method Statement and Tree Protection Plan shall be adhered to throughout the development.

(Paragraph 6 of previous submitted AIA dated February 2021)

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 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.

At the time of writing this document, no service and/or drainage plans have been supplied for consideration in preparation of this report.



DISCLAIMER

Survey Limitations: Unless otherwise stated all trees are surveyed from ground level using non-invasive techniques. 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 in areas of ground vegetation, cannot therefore be expected. All obvious defects, however, are reported. 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 regards 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 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 potentially unacceptable risk to persons and/or property has been identified during our survey. 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 first attempt to inform the site occupier of the issues and, if not possible, then inform the relevant Council. 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 at the time of the survey using, where appropriate and/or practicable, a combination of measurement triangulation and GPS coordination. Where this is not possible then locations are estimated. Restrictions in these respects are detailed in the report.

The tree survey and any report information provided is intended as a guide to identify key tree related constraints to site development only. As such, 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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Statutory Tree Protection: It is the client's responsibility to check for the presence of any statutory tree protection measures, such as the site's location within a Conservation Area and/or the presence of any Tree Preservation Orders, directly with the applicable Council's planning department prior to scheduling or carrying out any tree works. In turn, it is also the client's responsibility to check for the need for a felling licence with the Forestry Commission prior to scheduling or carrying out any tree Consultancy Ltd cannot be held responsible for any decisions made by the client to prune or remove trees where any such statutory protection exists.

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Validity: The findings and recommendations contained within this report are, providing its recommendations are observed and the site conditions are retained as per the date(s) of the survey, valid for a period of twelve months from the last survey date. This period of validity may be reduced should there be any changes in factors affecting both the surrounding environment and/or built structures in relative proximity to the trees. The condition of trees should be re-appraised directly, through a site survey, following major weather events such as storms, changes undertaken to the site's conditions, inclusive of demolition and/or ground works, or the removal of existing site vegetation, including trees.

Approved Development:	Residential Redevelopment of the Site and Erection of 4 no. Executive Style Dwellings	Prepared by:	Joseph Lambert Chartered Arboriculturist		
Site:	Land adjacent to Crabtree Hurst, Lench Road, Waterfoot, Lancashire, BB4 7JH	Report Date:	21 February 2024	Page:	
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Pertinent Condition No.:	21	Client:	John Hardie		
Scope of Arboricultural Me	thod Statement				1

This Arboricultural Method Statement (AMS) relates specifically to the approved construction works at the above existing site, as detailed on the Tree Protection Plan (TPP) reference BTC2137 - TPP.

- The AMS and TPP should be read in conjunction with all other appended report sections.
- The purpose of the AMS is to consider the potential effects of the development work operations on the retained trees, and sets out how any identified adverse impacts are, as far as is practicable, to be avoided.
- From commencement of the development, and throughout the site works until completion, the methodology shall be implemented in the sequence and manner detailed in the Sequence of Works.
- As part of the tendering process, the client/client's agent shall provide the building contractor(s) with the AMS, the TPP and relevant appendices.
- In turn, the appointed building contractor shall be required to review the documents in detail and shall take the requirements of the AMS into consideration when pricing for the works.
- It shall be the contractor's responsibility to ensure that the works are carried out in strict accordance with the obligations and responsibilities of the AMS and, in turn, they will be accountable for any breaches of the obligations and responsibilities.
- Directly following the appointment of a building contractor, the specifics of the AMS and TPP shall be reviewed by the contractor and the Project Tree Consultant. In turn, the AMS and TPP shall be updated, by the Tree Consultant, in accordance with any changes in the development design that may have occurred subsequent to this AMS and TPP being issued, or any issues that may have arisen as a result of the review.
- As soon as is practicable the amended documents shall then be issued to the LPA for review NB: it shall be the client's/client's agent's responsibility to arrange this review with the Project Tree Consultant immediately following the granting of planning permission.

Site Inspections & Reporting by Project Tree Consultant

- Prior to the commencement of the development, all personnel who are likely to be charged with overseeing development related works shall be provided with the contact details of the Project Tree Consultant.
- In turn, it is the responsibility of the building contractor's site manager to report any tree related issues, including deviations from the AMS, directly to the Project Tree Consultant, who will then visit the site if required and make recommendations to the building contractor/site manager on how best to rectify the situation.
- The Building Contractor's site manager will be responsible for ensuring photograph evidence is periodically recorded at pertinent stages during the course of the development works and kept on file, which can be produced if requested by the LPA Tree Officer or Project Tree Consultant, of agreed tree protective measures remaining in place in accordance with the appended plans, specifications and report in order to ensure compliance with the AMS and any planning conditions pertaining to tree issues.
- Should any breaches of the detailed tree protection measures occur the Building Contractor's site manager will detail any evidence of such, in the form of photographic evidence if necessary, and contact the Project Tree Consultant immediately who will advise in respect of the breach and may request a site visit to view in person.
- In the event of the client terminating the contract with the Project Tree Consultant, the Project Tree Consultant shall notify the LPA before the end of the next working day following termination.
- The Project Tree Consultant shall report any tree related issues and/or breaches of the AMS that they consider to be significant in relation to retained tree health and/or structural stability directly to the Tree Officer.
- In the event that the Project Tree Consultant's site monitoring contract is terminated, then the client/client's representative shall issue a written notice to all relevant parties to this effect.

LPA Tree Officer

The LPA's Tree Officer shall have free access to the site and, should they visit the site and note any tree related issues, they will then report any problems directly to the site manager and, in turn, the Project Tree Consultant, who will then visit the site and make recommendations to the contractor's site manager on how best to rectify the situation.

Site Personnel

- All personnel engaged in the execution of the development works shall be provided with a copy of the AMS and the TPP.
- In turn, all such personnel shall be instructed in the protection of trees, as set out in this AMS.

Sequence of Works & Revisions

- The development works shall be carried out in strict accordance with the 'Sequence of Works' detailed in the table overleaf.
- Any proposed deviations from the 'Sequence of Works' shall be reported to the Project Tree Consultant, who will then review and comment on the modifications accordingly.
- Where the amendments are considered acceptable in relation to retained trees, then the Project Tree Consultant shall prepare and issue a revised version of the AMS to the LPA Tree Officer for comment.
- Should the Tree Officer consider the revised AMS to be acceptable, then the Project Tree Consultant shall issue the report to all pertinent persons, inclusive of the building contractor's site manager, the client/client's agent, and the project engineer.

Acknowledgment of Obligations and Responsibilities of Arboricultural Method Statement

The site manager shall provide a written acknowledgement, to the client/client's agent, the Project Tree Consultant, and the Tree Officer, that they shall abide by the obligations and responsibilities of the AMS, and that they will be accountable for any breaches of the obligations and responsibilities.

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Table of Sequence of Works:

No.	Operation*	Timing	Responsible Professional	Arboricultural Supervision	Specific Tree Protection Measures During Operation#
i	 Pre-contract site meeting between: Building Contractor's Site Manager; Project Manager; LPA Tree Officer; and Project Tree Consultant 	To be completed prior to any other works, including deliveries of material, plant, etc.	Building Contractor's Site Manager overseen by Project Manager	N/A	None - however, specific methods of tree protection shall be discussed in detail, in particular the protective fencing and locations (see Operation iv), between the parties present and, if identified as necessary, a schedule of supplementary recommendations shall be agreed between the parties and subsequently prepared and distributed to said parties by the Building Contractor's Site Manager
ii	Carry out approved tree works (i.e. removals) in accordance with written permission from Local Planning Office (LPA)	Only to commence on completion of Item i	Tree Contractor overseen by Project Manager	Project Tree Consultant to visit site to paint mark stems for removal and subsequently verbally advise Tree Contractor with regard to tree works where necessary	No vehicular or plant access within retained trees' RPAs under soft surfaces Any tree stumps within retained trees' RPAs to be cut to just above ground level and left in situ where proposed site usage allows Where stump removal is required within RPAs, then this should only be carried out using a stump grinder, and not a mechanical excavator, positioned on a temporary ground guard for the duration of works with stump holes to be backfilled with topsoil following stump removals No storage of any arising and/or site materials within RPA during works
iii	Mark up, on site, locations and extents of proposed Temporary Protective Fencing	Only to commence on completion of Item ii	Site Manager overseen by Project Manager	Project Tree Consultant to verbally advise Fencing Contractor with regard to siting and construction of fencing	No vehicular or plant access within retained trees' RPAs under soft surfaces No storage of site materials within RPAs
iv	Erect Temporary Protective Fencing to protect RPAs of specific retained trees, in locations identified on the TPP°	To be erected and installed immediately on completion of Item iii	Fencing Contractor overseen by Site Manager on advice of Project Tree Consultant	Project Tree Consultant to visit site, appraise protection measures, and provide brief report to LPA Tree Officer following their erection and installation (NB: it shall be the Site Manager's responsibility to arrange the Project Tree Consultant site visit)	No vehicular or plant access within retained trees' RPAs under soft surfaces No storage of site materials within RPAs Temporary protective fencing shall be installed in strict accordance with Temporary Protective Fencing Specification, with 'Type 2' fencing (see Specification) to be utilised subject to existing and retained surfaces in specific areas under consideration (NB: any proposed deviations from Specification should be discussed with the LPA Tree Officer at Operation i, and, where necessary, agreed in writing)

*Note 1: All operations to be subject to risk assessments and method statements to be provided by applicable contractor(s) #Note 2: The General Recommendations in Respect of Works, detailed at page 4, shall also be adhered to by all site operatives during all work operations Note 3: Refer to appended Temporary Protective Fencing Specification

continued overleaf



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Table of Sequence of Works (cont.):

No.	Operation*	Timing	Responsible Professional	Arboricultural Supervision	Specific Tree Protection Measures During Operation#
V	Commence main construction phase	Only to commence on completion of Item iv	Site Manager overseen by Project Manager	Tree Consultant to verbally brief Building Contractor's Site Manager prior to commencement of works if necessary	No vehicular or plant access within retained trees' RPAs under soft surfaces No storage of site materials within RPAs All works involving moving plant with booms, etc., to be supervised by a banksman where close to retained tree canopies to prevent contact and subsequent damage
vi	Complete main construction phase and remove all associated operational materials	Only to commence on completion of Item v	Site Manager overseen by Project Manager	LPA Tree Officer to visit site following completion of construction works and prior to Operation viii, below (NB: it shall be the Site Manager's responsibility to arrange the Tree Officer's site visit/inspection)	No vehicular or plant access within retained trees' RPAs under soft surfaces No storage of site materials within RPAs
vii	Commence landscaping works, inclusive of new tree planting and installation of boundary fencing within and in close proximity to retained trees' RPAs	Only to commence on completion of Item vi	Landscaping Contractor and Fencing Contractor overseen by Project Manager in consultation with Project Tree Consultant	Tree Consultant to verbally advise landscaping contractor if/where necessary. Landscaping contractor to retain record of works carried out within retained tree's RPAs to demonstrate works in accordance with sections 7 & 8 of BS5837:2012	Landscaping Contractor to provide Project Manager and Project Tree Consultant with a detailed schedule in regards to the maintenance of any newly planted trees in accordance with Section 8 BS5837:2012 All landscaping works to be undertaken in accordance with Section 7 BS5837:2012 including no significant level changes within RPAs. Fencing Contractor to provide Project Manager and Project Tree Consultant with a detailed method statement of works for installation of boundary fencing All fence post holes to be hand dug and holes lined with visqueen, or similar material, to prevent leaching of concrete into soil prior to curing, if applicable. Any post holes to be repositioned to avoid and retain any tree roots >25mm diameter encountered Landscape contractor to provide specific details and working methods regarding installation of informal pathways to west and south of site No vehicular or plant access within retained trees' RPAs under soft surfaces

*Note 1: All operations to be subject to risk assessments and method statements to be provided by applicable contractor(s) #Note 2: The General Recommendations in Respect of Works, detailed at page 4, shall also be adhered to by all site operatives during all work operations Note 3: Refer to appended Temporary Protective Fencing Specification



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General Recommendations in Respect of Works:

- All tree works should be implemented by suitably qualified and experienced arboricultural contractors in accordance with the tree works detailed in the Tree Survey Schedule prior to the erection of Protective Fencing.
- All tree works should conform to British Standard BS3998:2010 Tree Work Recommendations.
- Performance of all arboricultural operations and use of equipment should be in accordance with current directives of the Health and Safety Executive (HSE) and industry codes of practice.
- All operatives should be equipped with and use Personal Protective Equipment (PPE) in accordance with current directives of the HSE and industry codes of practice.
- All tree stumps scheduled for removal that are located within a distance of 6.0 metres of any retained tree should be removed by mechanical stump grinder and not by mechanical excavator.
- All possible efforts should be made by the tree contractor and any other site operatives to prevent damage to retained trees.
- There shall be no vehicular or plant (e.g. wood chipper) access within the RPAs of retained trees that are not under hard surfaced areas, as detailed on the TPP.
- All tree works arising should be removed from the site.
- No services are to be installed below ground level within RPAs.
- No construction related operations should occur within RPAs, unless specifically detailed in the Arboricultural Method Statement.
- No concrete should be mixed within RPAs.
- No excavation or any other operations should occur within the RPAs, other than as detailed in the Arboricultural Method Statement.
- All construction equipment and materials should be stored outside RPAs.
- No fires should be lit within 15.0m of any tree crown.
- Deliveries by crane should be supervised by the Site Manager, positioning the vehicle in such a manner that retained trees are not put at risk of damage.
- No substances with potential to contaminate the soil (e.g. chemicals, concrete washings, diesel, vehicle washings, etc.) should be discharged within 10.0 of any tree crown. This should take into consideration the topography of the site in order to avoid materials running towards trees.
- No notice boards, phone cables or services should be attached to any part of any tree.
- A log should be kept of any activity or incident with an impact or potential impact on protected trees and made available at all times for review by the Project Tree Consultant and the Tree Officer.



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Surveyor:	Joseph Lambert BSc(Hons) FdSC MArborA
Survey Date:	6 January 2020
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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)
T1	Common Ash	7	180#	N E S W	2.5 2.5 2.5 2.5	N/A 0	SM	М	 Located on neighbouring land immediately adjacent to stone retaining wall and not accessed to inspect in detail. Stem arises horizontally to north along ground before curving vertical. Canopy showing symptoms of colonisation by Ash Dieback Disease. Projected to displace wall on future incremental growth. RPA offset outside redline boundary and not projected to be impacted by adjacent works. 	 Recommend tree owner removes tree due to short remaining life expectancy and projected displacement of retaining wall on future incremental growth. If tree is retained then prune canopy back to boundary to allow construction of approved access. 	<10	U	15	2.16
T2	Common Oak	12	300#	N E S W	4.5 4.5 4.5 4.5	4-SW 3	SM	G	 Located on neighbouring land on ground lower than within site and not accessed to inspect in detail. Stone retaining wall immediately south-west of tree, with RPA consequently off set to north. 	 Retain tree in context of approved development. Ensure protection of tree's Root Protection Area (RPA) throughout development using Temporary Protective Fencing to form a Construction Exclusion Zone (CEZ) (See Tree Protection Plan (TPP)). 	20+	B1	41	3.6
ТЗ	Norway Maple	13	420#	N E S W	6.5 6.5 6.5 6.5	2-SE 2.5	EM	G	 Located on neighbouring land and not accessed to inspect in detail. Ground within site evidently higher and comprising a stone path and possibly previously built up to south-west, with RPA consequently off set to north. 	 Retain tree in context of approved development. Ensure protection of tree's RPA throughout development using Temporary Protective Fencing to form a CEZ (See TPP). Prune canopy on south-west side to ensure clearance of approximately 5m over approved access road. NB: Tree located on neighbouring land and as such works to take place from within curtilage of site. 	20+	B1	80	5.04
Т4	Common Alder	3.5	75	N E S W	1 1 1 1	N/A 0.5	Y	G	 Young tree. 	 Remove tree in order to construct development as approved. 	10+	C1	3	0.9

Headings and Abbreviations:

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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, 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 m ² :	Root Protection Ärea in m ² - calculated area around the tree that must be appropriately protected throughout the development process in order avoid root damage	Bowland Ć
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 Consultancy Ltd

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Surveyor:	Joseph Lambert BSc(Hons) FdSC MArborA	Γ
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T5	Common Oak	13	300#	N E S W	6.5 6.5 6.5 6.5	N/A 2	SM	G	 Located on neighbouring land and not accessed to inspect in detail. Group G1 also restricted visibility of tree. Stone structure within site, currently used as a manure heap, located to south-east of tree canopy. 	 Ensure protection of tree's RPA throughout development using Temporary Protective Fencing to form a CEZ (See TPP). Banksman to supervise works to remove existing stone structure in order to prevent machinery contact with adjacent tree canopy. 	20+	B1	41	3.6
Т6	Common Ash	11	160#	S	3.5 3.5 3.5 3.5	N/A 0	SM	Ρ	 Located on neighbouring land and not accessed to inspect in detail, with 2m high wooden boundary fence restricting visibility. Canopy showing a severe reduction in vitality with severe twig dieback due to colonisation by Ash Dieback Disease. 	 Recommend tree owner removes tree due to short remaining life expectancy. NB: If retained upon commencement of works, tree is projected to be adequately protected by location outside site boundary (See TPP). 	<10	U	12	1.92
Τ7	Common Ash	8.5	140#		2.5 2.5 2.5 2.5	2.5 2.5	SM	M/P	 Located on neighbouring land and not accessed to inspect in detail, with 2m high wooden boundary fence restricting visibility. Canopy showing a moderately severe reduction in vitality with moderately severe twig dieback due to colonisation by Ash Dieback Disease. 	 Recommend tree owner removes tree due to short remaining life expectancy. NB: If retained upon commencement of works, tree is projected to be adequately protected by location outside site boundary (See TPP). 	<10	U	9	1.68
Т8	Common Hawthorn	3	2x150 (ts)	E S	3 3 3 3	N/A	SM	G	 Located adjacent to stone wall retaining wall with RPA subsequently offset. Not projected to be impacted by approved development. 		10+	C1	20	2.55
Т9	Common Alder	14	420#	S	5.5 5.5 5.5 5.5 5.5	N/A 3	EM	G	 Located east of watercourse on banking on neighbouring land, and not subsequently accessed to inspect in detail. RPA offset to south-east due to stone lined watercourse. Canopy pruned to north-east side to clear high voltage overhead power lines. Not projected to be impacted by approved development. 		20+	B1	80	5.04
T10	Common Hawthorn	3	3x130 (ms)	S	4 4 2	0 0	PM	М	 Old stem likely part of previous hedgerow. Stem has extensive brown rot decay within and has evidently previously failed to south-west, with three stems now arising vertically and forming low canopy. 	Remove tree due to short remaining life expectancy.	<10	U	23	2.7
T11	Common Alder	13	650#	N E S W	6.5 5 5 6.5	2.5-W 1.5	M/PM	М	 Located on opposite side of fence outside boundary, but understood to be within client's ownership, although not accessed to inspect in detail. Large historic basal cavity of approximately 300mm width and 400mm depth with significant stem hollowing to north between ground level and a height of approximately 1m. Canopy showing a slight reduction in vitality. 	 Ensure protection of tree's RPA throughout development using Temporary Protective Fencing to form a CEZ. 	10+	C1	191	7.8



 Site:
 Land adjacent to Crabtree Hurst, Lench Road, Waterfoot, Lancashire, BB4 7JH

 Client:
 John Hardie

Surveyor:	Joseph Lambert BSc(Hons) FdSC MArborA
Survey Date:	6 January 2020
Job Reference:	BTC2137

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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)
T12	Common Hawthorn	9	280#		4 4 5 5	N/A 0	М	М	 Located on opposite side of fence outside boundary, but understood to be within client's wider ownership, although not accessed to inspect in detail. Suppressed by larger tree T11. Not projected to be impacted by approved development. 	•	10+	C1	35	3.36
T13	Cherry Laurel	4	6x50 (ms)#	N E S W	1.5 1.5 1.5 1.5	N/A 0	SM	G	 Located on opposite side of fence outside boundary, but understood to be within client's ownership, although not accessed to inspect in detail. Large shrub with multiple stems from ground level. Not projected to be impacted by approved development. 		10+	C1	7	1.47
T14	Western Red Cedar	10	230		2 2 2 2	1 0	SM	G	 Electric tape fence tied round stem to 1m height. Ground in RPA compacted and poached from horses 	 Retain tree in context of approved development. Ensure protection of tree's RPA throughout development using Temporary Protective Fencing to form a CEZ. 	10+	C1	24	2.76
G1	Common Hawthorn	9 N	≤ 120#	E S	≤ 5 ≤ 5 ≤ 5 ≤ 5	N/A ≥ 0	SM	G	 Very closely spaced group forming boundary feature. Located on neighbouring land to north, and not accessed to inspect in detail. At base of steeply sloping bank to north-east with retaining elements along parts of boundary and RPA subsequently offset in these locations. 	 Ensure protection of group's RPA throughout development using Temporary Protective Fencing to form a CEZ, where applicable (See TPP). Prune canopy back to boundary line on south- western side in order to allow construction of approved access road. 	10+	C2	≤ 17	≤ 2.36
G2	7no. Scots Pine	≤ 13.5	≤ 270#	S	≤ 2.5 ≤ 2.5 ≤ 2.5 ≤ 2.5	1.5 ≥2	EM	G	 Located on neighbouring land and therefore not accessed to inspect in detail. Closely spaced group. Not projected to be impacted by approved development. 	• N/A	20+	B1/2	≤ 33	≤ 3.24
G3	Alder, Pear, Weeping Willow, Birch, Rowan	≤ 7.5	≤ 170	E S	≤ 2.5 ≤ 2.5 ≤ 2.5 ≤ 3	N/A ≥ 0	Y-SM	M-G	 Moderately closely spaced group of approximately 30 trees, with roughly one third young and two thirds semi-mature. Trees evidently planted to top and side of banking. Several trees have slight stem leans east and/or stakes and rubber ties attached with resultant minor stem damage. 	 Remove group in order to construct development as approved. 	10+	C1	≤ 13	≤ 2.04
G4	3no. Common Hawthorn	≤ 4	≤ 150	E S	≤ 2.5 ≤ 2.5 ≤ 2.5 ≤ 2.5 ≤ 2.5	N/A	SM		 Moderately spaced group located to east of stone lined watercourse, and possibly on neighbouring land. Not accessed to inspect in detail. RPAs offset away from stone lined watercourse. Not projected to be impacted by approved development. 		10+	C1	≤ 10	≤ 1.8



Site:Land adjacent to Crabtree Hurst, Lench Road, Waterfoot, Lancashire, BB4 7JHClient:John Hardie

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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)
G5	approx. 35no. Leyland Cypress	≤ 10	≤ 270	E S	≤ 3 ≤ 3 ≤ 3 ≤ 3	0 ≥ 0	SM		 Very closely spaced group located to south-west of fence forming boundary feature. Located outside boundary, but understood to be within client's ownership, although not accessed to inspect in detail. Several stems have moderate leans to east from ground level. 	 Ensure protection of group's RPA throughout development using Temporary Protective Fencing to form a CEZ. 	10+	C2	≤ 33	≤ 3.24
G6	4no. Leyland Cypress	≤ 8	≤ 230	S	≤ 2.5 ≤ 2.5 ≤ 2.5 ≤ 2.5	0 ≥ 0	SM		 Closely spaced linear group. North tree has electric fencing tape around stem to a height of approximately 1m. 	 Retain group in context of approved development. Ensure protection of group's RPA throughout development using Temporary Protective Fencing to form a CEZ. 	10+	C1	≤ 24	≤ 2.76
G7	Goat Willow, Cherry Laurel	≤ 7	≤ 130	E S	≤ 4.5 ≤ 4.5 ≤ 4.5 ≤ 3	N/A ≥ 0	SM	G	 End of wider group extending to south-west. Located outside boundary, but understood to be within client's ownership, although not accessed to inspect in detail. 	 Prune canopies back to boundary in order to allow construction of approved footpath adjacent to access. 	10+	C1	≤ 13	≤ 2.07
G8	approx. 18no. Leyland Cypress 'Green Spire', Spruce, Pine, Fir	≤ 4	≤ 90#	E S	≤1 ≤1 ≤1 ≤1	N/A ≥ 0	Y		 Not able to fully access due to wooden shed immediately east and fencing. Very closely spaced group located in very close proximity to wooden stable outbuilding. Group likely to require removal over short to medium term due to species and projected scale of future growth, and proximity to out-building and surrounding retaining wall. 	Remove group in order to construct access road and development as approved.	<10	U	≤ 4	≤ 1.08
H1	Common Hawthorn	≤ 3	≈ 120	1.	≈ 2 wide	N/A	SM	М	 Length of fragmented hedge with several large gaps. Located between gabion wall and boundary fence. Canopy previously managed on west side to wall edge. Not projected to be impacted by approved development. 	■ N/A	10+	C2	N/A	≈ 1



Category and definition	Criteria (including subcategories where app	ropriate)		Identification on plan
Trees unsuitable for retention (see				
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 qualit Note: Category U trees can have existing or poparagraph 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 t 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	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

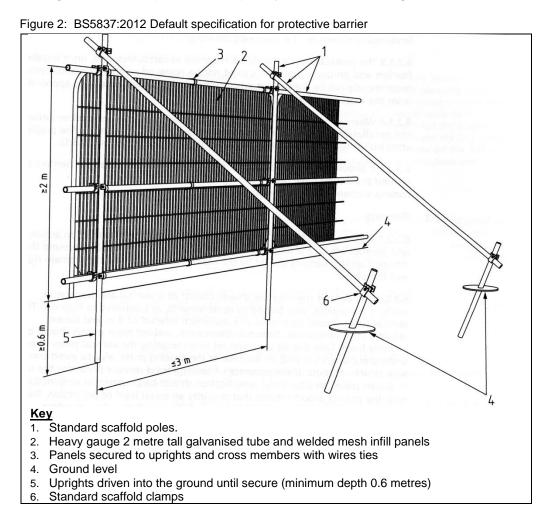
THE FOLLOWING <u>MUST</u> BE OBSERVED BY <u>ALL</u> PERSONNEL:

- 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

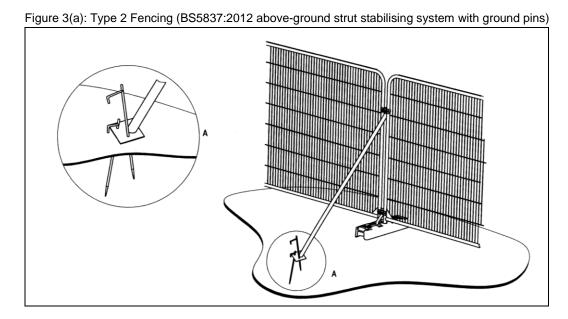
Type 1 (i.e. 'Default') Temporary Protective Fencing Construction (see Figure 2, below)

- 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.

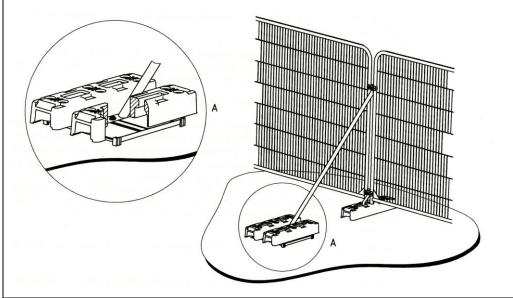


Type 3 Temporary Protective Fencing Construction (see Figure 3(b), overleaf)

- 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.

