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# Arboricultural Impact Assessment

in Respect of Proposed Development of 7 Residential Properties at



Moorcock Inn, Slaidburn Road,  
Waddington, Lancashire, BB7 3AA

Prepared by:

**Bowland**   
Tree Consultancy Ltd

June 2014

**ARBORICULTURAL IMPACT ASSESSMENT  
MOORCOCK INN, WADDINGTON**

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ARBORICULTURAL IMPACT ASSESSMENT	
Site:	Moorcock Inn, Slaidburn Road, Waddington, Lancashire, BB7 3AA
Proposal:	Residential development of 7 units
Survey Date:	19 September 2013
Report Date:	26 June 2014
Prepared By:	Phill Harris – Chartered Arboriculturist
Report Ref:	BTC544
Agent for Client:	Sunderland Peacock & Associates Ltd

**Introduction and Rationale.** Bowland Tree Consultancy Ltd was instructed to carry out an appraisal of the potential for the construction of a residential development at the above site to impact upon trees and, in turn, to advise on appropriate protective measures for retained trees during development and on facilitation pruning and/or felling works where identified as necessary. Further to this instruction I confirm that I visited the site on 19 September 2013 and carried out a survey of trees in accordance with BS5837:2012 - Trees in Relation to Design, Demolition and Construction – Recommendations, and our disclaimer at page 5.

In this respect I set out a brief overview of my observations, findings and recommendations below, along with comments on any issues raised. I also enclose a Tree Survey Schedule (TSS) detailing specific tree related information, and a Tree Impact Plan (TIP). The TIP shows the site under consideration with pertinent tree constraints detailed, along with an overlay of the proposals with associated tree impacts indicated, and approximate locations considered suitable for new tree planting in the context of the proposed development.

The plan was produced using a scaled electronic topographical survey based proposal plan supplied by the client's agents, Sunderland Peacock and, for the purpose of this report I presume the plan's details to be accurate.

**The Site and the Proposals.** The site under consideration, which is a disused pub, is located within a rural area north of the village of Waddington, within the administrative boundaries of Ribbles Valley Borough Council. The site currently consists of the pub building to the east and a large car-park to the west, and has trees along its northern boundary (see Figs. 1 & 2, below). As the site stands on a south facing hill its topography is variable, with a moderate fall in levels from north to south.



Fig 1: Eastern section of the site, looking east



Fig 2: The western section of the site, looking west

I am informed, by the client's agents, Sunderland Peacock, that the proposal is to construct a residential development of seven units, as detailed on the TIP. It is proposed that the existing lane, that accesses the site from Slaidburn Road to the south-east, will be utilised for vehicular access.

**The Trees.** 31 individual trees (prefixed 'T'), ten groups (prefixed 'G'), one hedge (prefixed 'H'), and one woodland (prefixed 'W') were surveyed in respect of the proposal and its associated potential to impact upon said vegetation, and the respective constraints of these items are plotted on the TIP.

The surveyed vegetation consists of various native and non-native deciduous broadleaf and evergreen coniferous species, including Birch, Sycamore, Goat Willow and Leyland Cypress. The trees are in the young to early-mature age range and stand at heights of up to 13.5 metres, have maximum diametrical crown spreads of up to approximately 11.5 metres and stem diameters up to approximately 430 millimetres. Tree dimensions and other pertinent information, such as structural defects and physiological deficiencies, along with recommendations for remedial management works, are included in the TSS attached.

The trees were appraised in accordance with BS5837:2012 Table 1 (appended) and, as detailed in Table A (below), 13 of the trees, five of the groups, and the woodland were allocated a moderate retention value of 'B', and 14 of the trees, five of the groups and the hedge were allocated a low retention value of 'C'. In addition, four trees are considered unsuited for retention due to relatively short projected remaining life expectancies. With regard to Table A it should be noted that tree quality and value is categorised within the existing context without taking into account any site development related issues, but that the recommendations for works take the proposal into consideration where there are clearly definable potential impacts upon trees.

**Table A: BS5837-2012 Retention Categories of the Surveyed Vegetation**

	Ret. Cats.	Tree/ Group/Hedge/ Woodland Numbers	Totals
Those of a high quality that should be afforded appropriate consideration in the context of development	'A'	-	-
Those of a moderate quality that should be afforded appropriate consideration in the context of development	'B'	T14, T15, T16, T18, T19, T20, T21, T22, T23, T25, T26, T29, T30, G3, G4, G6, G8, G10, W1	13 Trees 5 Groups 1 Woodland
Those of a low quality that should be afforded appropriate consideration in the context of development	'C'	T1, T2, T5, T6, T8, T9, T11, T12, T13, T17, T24, T27, T28, T31, G1, G2, G5, G7, G9, H1	14 Trees 5 Groups 1 Hedge
Those considered unsuitable for retention	'U'	T3, T4, T7, T10,	4 Trees
			<b>= 31 Trees, 10 Groups, 2 Hedges &amp; 1 Woodland in Total</b>

**The Proposal's Projected Impacts on Trees.** As detailed in Table B (below), and on the appended TIP, construction of the development as proposed is projected to require the removal of four 'B' category trees and one 'B' category group, and six 'C' category trees and one 'C' category group. In addition, the removal of three 'C' category trees and two 'C' category groups is suggested in the context of the proposed site landscaping.

Overall however, the losses are projected to have only a relatively minor impact upon the visual amenity of the local landscape due to the presence of the woodland to the north and the proposal to retain the remainder of the trees within the site boundaries to the north-west.

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

	Ret. Cats.	Removals necessary to implement development	Removals recommended regardless of proposals	Removals suggested for other reasons	Total number of tree removals
Those of a high quality that should be afforded appropriate consideration in the context of development	'A'	-	-	-	-
Those of a moderate quality that should be afforded appropriate consideration in the context of development	'B'	T22, T23, T25, T26, G6	-	-	4 Trees 1 Group
Those of a low quality that should be afforded appropriate consideration in the context of development	'C'	T1, T5, T6, T24, T27, T28, G5	-	T8, T9, T11, G7, G9	9 Trees 3 Groups
Those that should be removed for sound management reasons regardless of site plans	'U'	-	T3, T4, T7, T10	-	4 Trees
<b>Totals</b>		10 Trees 2 Groups	4 Trees	3 Trees 2 Groups	<b>= 17 Trees &amp; 4 Groups in Total</b>

**Mitigation for Projected Tree Losses.** As indicated on the TIP, it is anticipated that the proposed development can accommodate a substantial number of newly planted trees of suitable native and, where considered appropriate (such as the feature tree), non-native species which, over the long term, is projected to contribute substantially to the visual amenity of the locality and, in turn, sufficiently mitigate for the tree losses required in order to implement the proposed development. Specific details regarding tree numbers, species, planting locations and post-planting management can be conditioned to a planning approval.

**Tree Retention Recommendations.** Adequate protection of retained tree Root Protection Areas (RPAs) during construction is essential if their long-term viability is to be assured. RPAs, which are calculated through a method provided in BS5837:2012, are ground areas around trees that are to be kept free from major disturbance throughout development through the installation of temporary protective fencing to form a Construction Exclusion Zone. The TSS lists the RPAs of the individually surveyed trees as areas in square metres and as radial distances in metres from stem centres, whilst the RPAs are indicated in magenta on the TIP. A Temporary Protective Fencing Specification is attached which gives details of the type, purpose and construction of the temporary protective fencing that should be used.

In respect of the protection of the retained trees BS5837:2012 recommends that, where considered expedient, an Arboricultural Method Statement (AMS) and Tree Protection Plan (TPP) detailing special mitigation construction should be prepared. Essentially, the AMS and TPP describe the procedures, working methods and protective measures to be used in relation to retained trees in order to ensure that they are adequately protected during the construction process. The production of and adherence to an AMS and TPP should therefore be conditioned as part of a planning approval.

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

**Summary and Conclusions.** The construction of a seven unit residential development is proposed at the site under consideration. As such, 31 individual trees, ten groups of trees, one hedge, and one woodland were surveyed in respect of the proposal and its associated potential to impact upon said vegetation.

13 trees, five groups, and the woodland have moderate retention values, 14 trees, five groups and the hedge have low retention values, and four of the trees are considered unsuitable for retention.

From the information provided my appraisal determined that implementation of the proposed development will require the removal of four moderate quality trees and one moderate quality group, along with six low quality trees and one low quality group. In addition, the removal of three low quality trees and two low quality groups is suggested in the context of the proposed site landscaping.

However, it is projected that the necessary tree losses will have only a relatively minor impact upon the visual amenity of the local landscape, and that these losses can be adequately mitigated for through the provision of high quality new trees planted elsewhere on site, the provision of which can be conditioned to a planning approval.

In addition, it is projected that the remainder of the surveyed trees can be retained and adequately protected throughout the development in accordance with BS5837:2012, provided that the specific recommendations made herein are adhered to. In order to help secure successful retained tree protection the preparation of an Arboricultural Method Statement and a Tree Protection Plan should therefore be conditioned to a planning approval.

**Phill Harris** MSc BSc(Hons) HND CEnv MArborA MICFor  
Chartered Arboriculturist

 Institute of Chartered Foresters  
Registered Consultant

 CAS  
Consulting Arborist Society  
PROFESSIONAL MEMBERS

## **GENERAL RECOMMENDATIONS**

**Non-Development Related Tree Works and Recommendations.** Any general management pruning works for retained trees that are stated to be non-development related, as detailed in the TSS, are recommended in accordance with prudent arboricultural management and should therefore be carried out regardless of any site plans and potential changes in land usage. All tree works should be carried out in accordance with BS3998:2010 - Tree Work – Recommendations.

**Tree Work Related Consents.** No tree pruning or removal works should commence on site until necessary consents have been obtained from the LPA as part of a planning approval or in respect of any statutory tree protection.

**Protected Species.** Hedges, climbing plants, shrubs and trees should be inspected for birds' nests prior to any clipping, pruning or removal works, and any work likely to destroy or disturb active nests should be avoided until the young have fledged. All personnel carrying out tree works should also be vigilant of the possibility that roosting bats may be present in trees and, if any bat roosts are identified, then it is essential that works are halted immediately and that a suitably qualified and experienced ecologist investigate prior to works continuing.

**Arboricultural Contractors.** All tree works should be carried out by suitably qualified and experienced arboricultural contractors carrying appropriate public liability insurance cover and be implemented to the minimum current CE and UK industry standards and in accordance with industry codes of practice. Only certificated personnel should, in accordance with The Control of Pesticides Regulations, apply any pesticides.

**Contractors and Subsequently Identified Tree Defects.** Contractors should be made aware that, should any significant tree defects become apparent during operations that would not have been immediately obvious to the surveyor, then such defects should be notified immediately to the client and subsequently confirmed to the consultant within five working days.

**New Tree Planting.** Where trees are removed in order to facilitate construction then new tree planting proposals should be included as part of the landscape design plan for the site. All tree planting and subsequent young tree management at the site should be carried out in accordance with BS 8545:2014 Trees: from nursery to independence in the landscape – Recommendations.

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

**Underground Utilities.** 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, and specifics regarding these routes should be included as part of a detailed planning application. 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).

## **DISCLAIMER**

**Survey Limitations:** Unless otherwise stated all trees are surveyed from ground level using non-invasive techniques, in sufficient detail to gather data for and inform the design of the current project only. The disclosure of hidden crown and stem defects, in particular where they may be above a reachable height or where trees are ivy clad or located in areas of restrictive ground vegetation, cannot therefore be expected. Detailed tree safety appraisals are only carried out under specific written instructions. Comments upon evident tree safety relate to the condition of said tree at the time of the survey only. Unless otherwise stated all trees should be re-inspected annually in order to appraise their on-going mechanical integrity and physiological condition. It should, however, be recognised that tree condition is subject to change, for example due to the effects of disease, decay, high winds, development works, etc. Changes in land use or site conditions (e.g. development that increases access frequency) and the occurrence of severe weather incidents are also significant considerations with regard to tree structural integrity, and trees should therefore be re-assessed in the context of such changes and/or incidents and inspected at intervals relative to identified and varying site conditions and associated risks.

Where trees are located wholly or partially on neighbouring private third-party land then said land is not accessed and our inspection is therefore restricted to what can reasonably be seen from within the site. Stem diameters and other measurements of trees located on such land are estimated. Any subsequent comments and judgments made in respect of such trees are based on these restrictions and are our preliminary opinion only. Recommendations for works to neighbouring third-party trees are only made where a potential risk to persons and/or property has been identified during our survey or, if applicable, where permissible works are required to implement a proposed development. Where significant structural defects of third-party trees are identified and associated management works are considered essential to negate any risk of harm and/or damage then we will inform the relevant Council of the matter. Where a more detailed assessment is considered necessary then appropriate recommendations are set out in the Tree Survey Schedule.

Where tree stem locations are not included on the plan(s) provided then they are plotted by the arboriculturist at the time of the survey using, where appropriate and/or practicable, a combination of measurement triangulation and GPS co-ordination. Where this is not possible then locations are estimated. Restrictions in these respects are detailed in the report.

This document is intended as a guide to identify key tree related constraints to site development only, and the potential influence of trees upon existing or proposed buildings or other structures resulting from the effects of their roots abstracting water from shrinkable load-bearing soils is not considered herein. The tree survey information in its current form should not therefore be considered sufficient to determine appropriate foundation depths for new buildings. Accordingly, an updated survey, with reference to the current NHBC Standards Chapter 4.2 - Building Near Trees, must therefore be prepared for the specific purpose of informing suitable foundation depths subsequent to planning approval being granted. The advice of a structural engineer must also be sought with regard to appropriate foundation depths for new buildings.

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**TREE SURVEY SCHEDULE FOR ARBORICULTURAL IMPACT APPRAISAL**

**Site:** Moorcock Inn, Slaidburn Road, Waddington, Lancashire, BB7 3AA

**Agent for Client:** Sunderland Peacock & Associates Ltd

**Surveyor:** Phill Harris – Chartered Arboriculturist

**Survey Date:** 19 September 2013

**Job Reference:** BTC544

No.	Species	Height	Stem Diam.	Branch Spread	Branch & Canopy Clearances	Life Stage	PC	General Observations and Comments	Management Recommendations	ERC	Cal. Grade	RPA (m <sup>2</sup> )	RPA Radius (m)
T1	Silver Birch	12.5	430	N 4 E 4.5 S 5 W 3.5	4-S 2.5	EM	M/P	<ul style="list-style-type: none"> <li>Very dense ivy up stem.</li> <li>Crown showing signs of a substantial reduction in vitality with small leaves and sparse foliage cover.</li> <li>Retaining wall to east of tree within RPA.</li> </ul>	<ul style="list-style-type: none"> <li>Remove in order to construct development as proposed, because of difficulties associated with successful retention due to existing retaining wall in RPA.</li> </ul>	10+	C1	84	5.16
T2	Sycamore	9	330	N 4 E 4 S 3.5 W 2.5	2.5 2	SM	P	<ul style="list-style-type: none"> <li>Crown showing signs of a significant reduction in vitality with small leaves, sparse foliage cover and extensive branch dieback.</li> </ul>	<ul style="list-style-type: none"> <li>Retain in context of proposed development.</li> <li>Ensure protection of RPA throughout development.</li> <li>Prune to remove deadwood and to balance crown.</li> </ul>	10+	C1	49	3.96
T3	Downy Birch	8.5	210	N 2.5 E 2.5 S 2.5 W 2	5 5	SM	MD	<ul style="list-style-type: none"> <li>Crown showing signs of a significant and evidently progressive reduction in vitality with small leaves, very sparse foliage cover and extensive twig dieback.</li> <li>In decline with short projected remaining life expectancy.</li> </ul>	<ul style="list-style-type: none"> <li>Remove due to short projected remaining life expectancy.</li> </ul>	<10	U	20	2.52
T4	Downy Birch	8	190	N 1.5 E 1.5 S 1.5 W 0.5	N/A 5	Y	MD	<ul style="list-style-type: none"> <li>Crown showing signs of a significant and evidently progressive reduction in vitality with small leaves, very sparse foliage cover and extensive twig dieback.</li> <li>In decline with short projected remaining life expectancy.</li> </ul>	<ul style="list-style-type: none"> <li>Remove due to short projected remaining life expectancy.</li> </ul>	<10	U	16	2.28
T5	Downy Birch	10	250	N 2.5 E 2.5 S 4 W 2.5	3-S 4	SM	P	<ul style="list-style-type: none"> <li>Two partially occluded wounds up to 200mm ling to lower stem, with no signs of progressive decay within.</li> <li>Crown showing signs of a substantial reduction in vitality with small leaves and sparse foliage cover.</li> </ul>	<ul style="list-style-type: none"> <li>Remove in order to construct development as proposed.</li> </ul>	10+	C1	28	3
T6	Downy Birch	8	190	N 3.5 E 3.5 S 2 W 1.5	3-N 3	Y	P	<ul style="list-style-type: none"> <li>Crown showing signs of a substantial reduction in vitality with small leaves and sparse foliage cover.</li> </ul>	<ul style="list-style-type: none"> <li>Remove in order to construct development as proposed.</li> </ul>	10+	C1	16	2.28
T7	Downy Birch	7.5	160	N 2 E 2 S 3 W 2	N/A 3	Y	MD	<ul style="list-style-type: none"> <li>Crown showing signs of a significant and evidently progressive reduction in vitality with small leaves, very sparse foliage cover and extensive twig dieback.</li> <li>In decline with short projected remaining life expectancy.</li> </ul>	<ul style="list-style-type: none"> <li>Remove due to short projected remaining life expectancy.</li> </ul>	<10	U	12	1.92

**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  
 Common name  
 Height - In metres, to nearest half metre - where possible approximately 80% are measured using an electronic clinometer and the remainder estimated against the measured trees. In the case of Groups and Woodlands the measurement listed is that of the highest tree  
 Stem Diam. - measured in millimetres, to nearest 10mm - measured and calculated as per Annex C of BS5837:2012. MS = multi-stemmed, TS = twin-stemmed  
 Branch Spread - Crown radius measured (or estimated where considered appropriate) from the four cardinal points (north, east, south and west) to give an accurate visual representation of the crown  
 Branch & Canopy Clearances - Existing height above ground level, in metres, of first significant branch and direction of growth (e.g. 2.5-N) and of canopy at lowest point - to inform on crown to height ratio, potential for shading, etc.  
 Life Stage - Estimated age class - Y = young, SM = semi-mature, EM = early-mature, M = mature, PM = post-mature  
 PC - Physiological Condition - a measure of the tree's overall vitality, i.e. D = Dead, MD = Moribund, P = Poor, M = Moderate, G = Good  
 General Observations and Comments: Comments relating to the tree's overall condition and any other pertinent factors including structural defects, current and potential direct structural damage, physiological decline, poor form, etc.  
 Management Recommendations: Either Preliminary or In Consideration of the Proposal - In the case of Arboricultural Constraints Surveys the recommended management works only take existing site and tree circumstances and conditions into account and not proposed developments. Arboricultural Impact Assessment and Method Statement related  
 ERC: Surveys take the proposed development into consideration with recommendations made appropriate. More than one option may be given if considered appropriate  
 Estimated Remaining Contribution - in years as per BS5837:2012 (i.e. <10, 10+, 20+, 40+)  
 Category Grading - tree retention value listed as U, A, B or C - in accordance with BS5837:2012 Table 1  
 RPA m<sup>2</sup>: Root Protection Area in m<sup>2</sup> - calculated area around the tree that must be appropriately protected throughout the development process in order to avoid root damage  
 RPA Radius (m): Root Protection Area Radius - in metres measured from the centre of the stem to the line of tree protection  
 # (Estimated Dimensions): Where trees are for plant only, or are inappropriate for any other reason, and accurate measurements or other information cannot be taken then the information provided is estimated and is denoted with a \* symbol

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Surveyor: Phill Harris – Chartered Arboriculturist

Survey Date: 19 September 2013

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No.	Species	Height	Stem Diam.	Branch Spread	Branch & Canopy Clearances	Life Stage	PC	General Observations and Comments	Management Recommendations	ERC	Cat. Grade	RPA (m <sup>2</sup> )	RPA Radius (m)
T8	Leyland Cypress	3	appr. 9x20 (ms)#	N 1.5 E 1.5 S 1.5 W 1.5	N/A 0	Y	M	<ul style="list-style-type: none"> <li>Multi-stemmed from ground level with included bark unions.</li> <li>Extensive foliar browning.</li> </ul>	<ul style="list-style-type: none"> <li>Remove due to low value.</li> </ul>	10+	C1	2	0.72
T9	Variegated Poplar	7	230	N 2 E 2 S 2 W 2	0.2 1	Y	P	<ul style="list-style-type: none"> <li>Widespread leaf rust.</li> <li>Extensive foliar dieback throughout lower crown.</li> </ul>	<ul style="list-style-type: none"> <li>Remove due to low value.</li> </ul>	10+	C1	24	2.76
T10	Downy Birch	9	200	N 5 E 1.5 S 3.5 W 2	3-S 4	SM	MD	<ul style="list-style-type: none"> <li>Large 1m long partially occluded cavity to mid stem with evidently non progressive decay within.</li> <li>Crown showing signs of a significant and evidently progressive reduction in vitality with very small leaves and very sparse foliage cover.</li> <li>In decline with short projected remaining life expectancy.</li> </ul>	<ul style="list-style-type: none"> <li>Remove due to short projected remaining life expectancy.</li> </ul>	<10	U	18	2.4
T11	Goat Willow	8	1x270 2x190 (ms)	N 0 E 5.5 S 6 W 5	N/A 0.5	EM	G	<ul style="list-style-type: none"> <li>Highly biased crown and severe stem lean to south.</li> <li>Stem trifurcates into sub stems at a height of approximately 0.3m.</li> </ul>	<ul style="list-style-type: none"> <li>Remove due to low value.</li> </ul>	10+	C1	59	4.35
T12	Downy Birch	12.5	350	N 4 E 2 S 4 W 3	3-S 2	EM	P	<ul style="list-style-type: none"> <li>Crown showing signs of a substantial reduction in vitality with very sparse foliage cover.</li> </ul>	<ul style="list-style-type: none"> <li>Retain in context of proposed development.</li> <li>Ensure protection of RPA throughout development.</li> </ul>	10+	C1	55	4.2
T13	Downy Birch	11	150	N 2 E 2 S 3 W 0.1	N/A 4	Y	P	<ul style="list-style-type: none"> <li>Crown showing signs of a substantial reduction in vitality with very sparse foliage cover.</li> <li>Highly biased crown to east due to suppression by neighbouring tree.</li> </ul>	<ul style="list-style-type: none"> <li>Retain in context of proposed development.</li> <li>Ensure protection of RPA throughout development.</li> </ul>	10+	C1	10	1.8
T14	Downy Birch	13.5	300	N 4.5 E 3.5 S 4.5 W 2.5	3 3	SM	M	<ul style="list-style-type: none"> <li>Crown showing signs of a reduction in vitality with moderately small leaves and slightly sparse foliage cover.</li> </ul>	<ul style="list-style-type: none"> <li>Retain in context of proposed development.</li> <li>Ensure protection of RPA throughout development.</li> </ul>	20+	B1/2	41	3.6
T15	Downy Birch	12	260	N 4 E 2.5 S 6 W 3	5-S 4	SM	M	<ul style="list-style-type: none"> <li>Crown showing signs of a reduction in vitality with moderately small leaves and slightly sparse foliage cover.</li> </ul>	<ul style="list-style-type: none"> <li>Retain in context of proposed development.</li> <li>Ensure protection of RPA throughout development.</li> </ul>	20+	B1/2	31	3.12
T16	Downy Birch	12	260	N 2.5 E 2.5 S 5 W 2	1-S 0.5	SM	M	<ul style="list-style-type: none"> <li>Moderately severe upper stem curvature.</li> <li>Crown showing signs of a reduction in vitality with moderately small leaves and slightly sparse foliage cover.</li> </ul>	<ul style="list-style-type: none"> <li>Retain in context of proposed development.</li> <li>Ensure protection of RPA throughout development.</li> </ul>	20+	B1/2	31	3.12

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No.	Species	Height	Stem Diam.	Branch Spread	Branch & Canopy Clearances	Life Stage	PC	General Observations and Comments	Management Recommendations	ERC	Cal. Grade	RPA (m <sup>2</sup> )	RPA Radius (m)
T17	Downy Birch	11.5	200	N 3 E 1.5 S 0 W 2	6	SM	M	<ul style="list-style-type: none"> <li>Highly biased crown to north-east due to suppression by neighbouring tree.</li> <li>Moderately severe mid-stem curvature.</li> <li>Crown showing signs of a reduction in vitality with moderately small leaves and slightly sparse foliage cover.</li> </ul>	<ul style="list-style-type: none"> <li>Retain in context of proposed development.</li> <li>Ensure protection of RPA throughout development.</li> </ul>	10+	C1	18	2.4
T18	Downy Birch	13	190	N 4 E 2 S 4.5 W 1	6-S 5	SM	M	<ul style="list-style-type: none"> <li>Crown showing signs of a reduction in vitality with moderately small leaves and slightly sparse foliage cover.</li> </ul>	<ul style="list-style-type: none"> <li>Retain in context of proposed development.</li> <li>Ensure protection of RPA throughout development.</li> </ul>	20+	B1/2	16	2.28
T19	Sycamore	8	220	N 4.5 E 3 S 4.5 W 3	1.5-S 2	SM	G	<ul style="list-style-type: none"> <li>Under crowns of neighbouring trees.</li> </ul>	<ul style="list-style-type: none"> <li>Retain in context of proposed development.</li> <li>Ensure protection of RPA throughout development.</li> </ul>	40+	B1/2	22	2.64
T20	Downy Birch	14	280	N 4 E 4 S 5.5 W 4	4-S 6	SM	M	<ul style="list-style-type: none"> <li>Crown showing signs of a reduction in vitality with moderately small leaves and slightly sparse foliage cover.</li> </ul>	<ul style="list-style-type: none"> <li>Retain in context of proposed development.</li> <li>Ensure protection of RPA throughout development.</li> </ul>	20+	B1/2	35	3.36
T21	Downy Birch	13.5	350	N 5 E 4 S 5 W 4	0.2-S 1	SM	M	<ul style="list-style-type: none"> <li>Crown showing signs of a reduction in vitality with moderately small leaves and slightly sparse foliage cover.</li> </ul>	<ul style="list-style-type: none"> <li>Retain in context of proposed development.</li> <li>Ensure protection of RPA throughout development.</li> </ul>	20+	B1/2	55	4.2
T22	Goat Willow	8	1x200 2x160 2x100 (ms) W 3.5	N 3.5 E 3.5 S 5.5 W 3.5	N/A 0.5	SM	G	<ul style="list-style-type: none"> <li>Stem divides into multiple sub-stems at a height of approximately 0.5m with several included bark unions.</li> </ul>	<ul style="list-style-type: none"> <li>Remove in order to construct development as proposed.</li> </ul>	20+	B1/2	50	4
T23	Downy Birch	12	270	N 4 E 2 S 4 W 2	5-S 4.5	SM	M	<ul style="list-style-type: none"> <li>1m long partially occluded wound to stem base with no signs of progressive decay within.</li> <li>Moderate upper stem curvature.</li> <li>Crown showing signs of a reduction in vitality with moderately small leaves and slightly sparse foliage cover.</li> </ul>	<ul style="list-style-type: none"> <li>Remove in order to construct development as proposed.</li> </ul>	20+	B1/2	33	3.24
T24	Downy Birch	7	200	N 4 E 1 S 6 W 1.5	1.6 4	SM	M	<ul style="list-style-type: none"> <li>Stem bifurcates at a height of approximately 1.6m.</li> <li>Crown showing signs of a reduction in vitality with moderately small leaves and slightly sparse foliage cover.</li> <li>Growing below crowns of neighbouring trees with subsequently highly suppressed growth potential.</li> </ul>	<ul style="list-style-type: none"> <li>Remove in order to construct development as proposed.</li> </ul>	10+	C1	18	2.4
T25	Sycamore	12	370	N 5 E 2 S 4 W 3	2-N 2	SM	G	<ul style="list-style-type: none"> <li>Part of group.</li> </ul>	<ul style="list-style-type: none"> <li>Remove in order to construct development as proposed.</li> </ul>	40+	B1/2	62	4.44

**TREE SURVEY SCHEDULE FOR ARBORICULTURAL IMPACT APPRAISAL**

**Site:** Moorcock Inn, Slaiburn Road, Waddington, Lancashire, BB7 3AA

**Agent for Client:** Sunderland Peacock & Associates Ltd

**Surveyor:** Phill Harris – Chartered Arboriculturist

**Survey Date:** 19 September 2013

**Job Reference:** BTC544

No.	Species	Height	Stem Diam.	Branch Spread	Branch & Canopy Clearances	Life Stage	PC	General Observations and Comments	Management Recommendations	ERC	Cat. Grade	RPA (m <sup>2</sup> )	RPA Radius (m)
T26	Sycamore	12	2x320 (ts)	N 4 E 4 S 6 W 4	3-S 1	SM	G	Two stems arise at ground level with a tight fork.	Remove in order to construct development as proposed.	20+	B1/2	93	5.43
T27	Sycamore	9	200	N 4 E 4 S 0 W 0	3 2.5	SM	G	Highly biased crown to north-east due to suppression by neighbouring tree.	Remove in order to construct development as proposed.	40+	C1	18	2.4
T28	Goat Willow	4.5	6x60 (ms)#	N 3 E 3 S 3 W 3	N/A 0	SM	G	On stream bank. Multi-stemmed from ground level.	Remove in order to construct development as proposed.	40+	C1/2	11	1.9
T29	Downy Birch	12	230	N 2 E 3.5 S 3.5 W 3.5	3-S 0.5	SM	G	Part of wider group.	Retain in context of proposed development. Ensure protection of RPA throughout development.	40+	B1/2	24	2.76
T30	Downy Birch	12	280	N 2 E 2 S 3 W 3	1-S 1	SM	G	No visible structural defects.	Retain in context of proposed development. Ensure protection of RPA throughout development.	40+	B1/2	35	3.36
T31	Downy Birch	10	120	N 1.5 E 2 S 2.5 W 2	N/A 2	Y	M	No visible structural defects.	Retain in context of proposed development. Ensure protection of RPA throughout development.	10+	C1	7	1.44
G1	approx. 2no. Beech	≤ 10	≤ 3x200 (ms)#	N ≤ 2 E ≤ 6 S ≤ 7 W ≤ 2	N/A ≥ 0	SM	M	Very closely spaced group of multi-stemmed trees. Evidently grown from previously cut stumps. May have previously formed part of hedge.	Retain in context of proposed development. Ensure protection of RPAs throughout development.	40+	C1/2	≤ 54	≤ 4.16
G2	2no. Downy Birch, 1no. Sycamore	≤ 13	≤ 320	N ≤ 4 E ≤ 4 S ≤ 5.5 W ≤ 3	1.5-S ≥ 1	Y-SM	P-G	Very closely spaced group. Semi-mature Birch and Sycamore stem bases in contact. Birch crowns showing signs of a significant reduction in vitality with very sparse foliage cover.	Retain in context of proposed development. Ensure protection of RPAs throughout development.	10+	C1	≤ 46	≤ 3.84
G3	2no. Downy Birch	≤ 12.5	≤ 240	N ≤ 4 E ≤ 3 S ≤ 4 W ≤ 3	3-SW ≥ 3	SM	M	Closely spaced group. Crowns showing signs of a reduction in vitality with moderately small leaves and slightly sparse foliage cover.	Retain in context of proposed development. Ensure protection of RPAs throughout development.	20+	B1/2	≤ 26	≤ 2.88

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**Agent for Client:** Sunderland Peacock & Associates Ltd

**Surveyor:** Phill Harris – Chartered Arboriculturist

**Survey Date:** 19 September 2013

**Job Reference:** BTC544

No.	Species	Height	Stem Diam.	Branch Spread	Branch & Canopy Clearances	Life Stage	PC	General Observations and Comments	Management Recommendations	ERC	Cat. Grade	RPA (m <sup>2</sup> )	RPA Radius (m)
G4	3no. Downy Birch, 1no. Sycamore	≤ 14	≤ 280	N ≤ 5.5 E ≤ 5.5 S ≤ 6 W ≤ 5.5	3-S ≥ 6	Y-SM	M-G	<ul style="list-style-type: none"> <li>■ Closely spaced group.</li> <li>■ Crowns showing signs of a reduction in vitality with moderately small leaves and slightly sparse foliage cover.</li> </ul>	<ul style="list-style-type: none"> <li>■ Retain in context of proposed development.</li> <li>■ Ensure protection of RPAs throughout development.</li> </ul>	20+	B1/2	≤ 35	≤ 3.36
G5	2no. Downy Birch	≤ 12	≤ 200	N ≤ 3 E ≤ 1.5 S ≤ 3 W ≤ 1	N/A ≥ 6	Y-SM	P	<ul style="list-style-type: none"> <li>■ Very closely spaced group.</li> <li>■ Both trees have large partially occluded wounds to lower stems with evidently non progressive decay within.</li> </ul>	<ul style="list-style-type: none"> <li>■ Remove in order to construct development as proposed.</li> </ul>	10+	C1	≤ 18	≤ 2.4
G6	2no. Downy Birch	≤ 12	≤ 280	N ≤ 4 E ≤ 3 S ≤ 5 W ≤ 1.5	0.1-S ≥ 0.5	SM	M	<ul style="list-style-type: none"> <li>■ Very closely spaced group.</li> <li>■ Crowns showing signs of a reduction in vitality with moderately small leaves and slightly sparse foliage cover.</li> </ul>	<ul style="list-style-type: none"> <li>■ Remove in order to construct development as proposed.</li> </ul>	20+	B1/2	≤ 35	≤ 3.36
G7	Goat Willow	≤ 5	≤ 4X60 (ms)#	N ≤ 3 E ≤ 3 S ≤ 3 W ≤ 3	N/A ≥ 0	Y	G	<ul style="list-style-type: none"> <li>■ Small very closely spaced group of self-set multi-stemmed trees on bank of stream.</li> </ul>	<ul style="list-style-type: none"> <li>■ Remove due to low value.</li> </ul>	10+	C1/2	≤ 7	≤ 1.44
G8	approx. 4no. Downy Birch	≤ 12	≤ 230	N ≤ 2 E ≤ 3.5 S ≤ 3.5 W ≤ 3.5	N/A ≥ 0.5	Y-SM	G	<ul style="list-style-type: none"> <li>■ Closely spaced group.</li> <li>■ Located on neighbouring land and therefore not inspected in detail.</li> </ul>	<ul style="list-style-type: none"> <li>■ Ensure protection of RPAs throughout development.</li> </ul>	40+	B1/2	≤ 24	≤ 2.76
G9	approx. 10no. Downy Birch	≤ 12	≤ 150	N ≤ 2.5 E ≤ 2.5 S ≤ 2.5 W ≤ 2.5	N/A ≥ 1	Y	G	<ul style="list-style-type: none"> <li>■ Very closely spaced group.</li> <li>■ Evidently located within site boundaries.</li> </ul>	<ul style="list-style-type: none"> <li>■ Remove due to low value.</li> </ul>	10+	C1/2	≤ 10	≤ 1.8
G10	approx. 4no. Downy Birch	≤ 12	≤ 230	N ≤ 2 E ≤ 3.5 S ≤ 3.5 W ≤ 3.5	N/A ≥ 0.5	SM	G	<ul style="list-style-type: none"> <li>■ Closely spaced group.</li> <li>■ Located on neighbouring land and therefore not inspected in detail.</li> </ul>	<ul style="list-style-type: none"> <li>■ Ensure protection of RPAs throughout development.</li> </ul>	40+	B1/2	≤ 24	≤ 2.76
W1	Downy Birch	≤ 14	≤ 300#	N ≤ 4 E ≤ 4 S ≤ 4 W ≤ 4	N/A ≥ 1	Y-SM	G	<ul style="list-style-type: none"> <li>■ Evidently monocultural woodland located on neighbouring land and therefore not inspected in detail.</li> <li>■ Trees are ≥4m from boundary fence and wall.</li> </ul>	<ul style="list-style-type: none"> <li>■ Ensure protection of RPAs throughout development.</li> </ul>	40+	B1/2	≤ 41	≤ 3.6
H1	Beech	≤ 2	N/A	≤ 2 wide	N/A ≥ 0	Y	G	<ul style="list-style-type: none"> <li>■ Section of maintained hedge along western boundary.</li> </ul>	<ul style="list-style-type: none"> <li>■ Retain in context of proposed development.</li> <li>■ Ensure protection of RPA throughout development.</li> </ul>	40+	C1/2	N/A	1

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

Category and definition	Criteria (including subcategories where appropriate)	Identification on plan
<b>Trees unsuitable for retention</b> (see Note)		
<b>Category U</b>	<ul style="list-style-type: none"> <li>▪ Trees that have a serious, irremediable, structural defect, such that their early loss is expected due to collapse, including those that will become unviable after removal of other category U trees (e.g. where, for whatever reason, the loss of companion shelter cannot be mitigated by pruning)</li> <li>▪ Trees that are dead or are showing signs of significant, immediate, and irreversible overall decline</li> <li>▪ Trees infected with pathogens of significance to the health and/or safety of other trees nearby, or very low quality trees suppressing adjacent trees of better quality</li> </ul> <p><i>Note: Category U trees can have existing or potential conservation value which it might be desirable to preserve; see BS5837:2012 paragraph 4.5.7.</i></p>	Red
<b>Trees to be considered for retention</b>		
<b>Category A</b>	<p><b>Mainly arboricultural qualities</b></p> <p>Trees that are particularly good examples of their species, especially if rare or unusual; or those that are essential components of groups or formal or semi-formal arboricultural features (e.g. the dominant and/or principal trees within an avenue)</p>	<b>Mainly landscape qualities</b>
<b>Category B</b>	<p><b>Mainly arboricultural qualities</b></p> <p>Trees that might be included in category A, but are downgraded because of impaired condition (e.g. presence of significant though remediable defects, including unsympathetic past management and storm damage), such that they are unlikely to be suitable for retention for beyond 40 years; or trees lacking the special quality necessary to merit the category A designation</p>	<b>Mainly cultural values, including conservation</b>
<b>Category C</b>	<p><b>Mainly arboricultural qualities</b></p> <p>Unremarkable trees of very limited merit or such impaired condition that they do not qualify in higher categories</p>	Trees, groups or woodlands of particular visual importance as arboricultural and/or landscape features
<b>Category D</b>	<p><b>Mainly arboricultural qualities</b></p> <p>Trees that are particularly good examples of their species, especially if rare or unusual; or those that are essential components of groups or formal or semi-formal arboricultural features (e.g. the dominant and/or principal trees within an avenue)</p>	Trees, groups or woodlands of significant conservation, historical, commemorative or other value (e.g. veteran trees or wood-pasture)
<b>Category E</b>	<p><b>Mainly arboricultural qualities</b></p> <p>Trees that might be included in category A, but are downgraded because of impaired condition (e.g. presence of significant though remediable defects, including unsympathetic past management and storm damage), such that they are unlikely to be suitable for retention for beyond 40 years; or trees lacking the special quality necessary to merit the category A designation</p>	Trees with material conservation or other cultural value
<b>Category F</b>	<p><b>Mainly arboricultural qualities</b></p> <p>Unremarkable trees of very limited merit or such impaired condition that they do not qualify in higher categories</p>	Trees present in numbers, usually as groups or woodlands, such that they attract a higher collective rating than they might as individuals; or trees occurring as collectives but situated so as to make little visual contribution to the wider locality
<b>Category G</b>	<p><b>Mainly arboricultural qualities</b></p> <p>Unremarkable trees of very limited merit or such impaired condition that they do not qualify in higher categories</p>	Trees present in groups or woodlands, but without this conferring on them significantly greater collective landscape value; and/or trees offering low or only temporary/transient landscape benefits
<b>Category H</b>	<p><b>Mainly arboricultural qualities</b></p> <p>Unremarkable trees of very limited merit or such impaired condition that they do not qualify in higher categories</p>	Trees with no material conservation or other cultural value
<b>Category I</b>	<p><b>Mainly arboricultural qualities</b></p> <p>Unremarkable trees of very limited merit or such impaired condition that they do not qualify in higher categories</p>	Trees with no material conservation or other cultural value
<b>Category J</b>	<p><b>Mainly arboricultural qualities</b></p> <p>Unremarkable trees of very limited merit or such impaired condition that they do not qualify in higher categories</p>	Trees with no material conservation or other cultural value
<b>Category K</b>	<p><b>Mainly arboricultural qualities</b></p> <p>Unremarkable trees of very limited merit or such impaired condition that they do not qualify in higher categories</p>	Trees with no material conservation or other cultural value
<b>Category L</b>	<p><b>Mainly arboricultural qualities</b></p> <p>Unremarkable trees of very limited merit or such impaired condition that they do not qualify in higher categories</p>	Trees with no material conservation or other cultural value
<b>Category M</b>	<p><b>Mainly arboricultural qualities</b></p> <p>Unremarkable trees of very limited merit or such impaired condition that they do not qualify in higher categories</p>	Trees with no material conservation or other cultural value

## - TEMPORARY PROTECTIVE FENCING SPECIFICATION -

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

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

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

### Temporary Protective Fencing Construction

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

Figure 1: CEZ Warning Sign

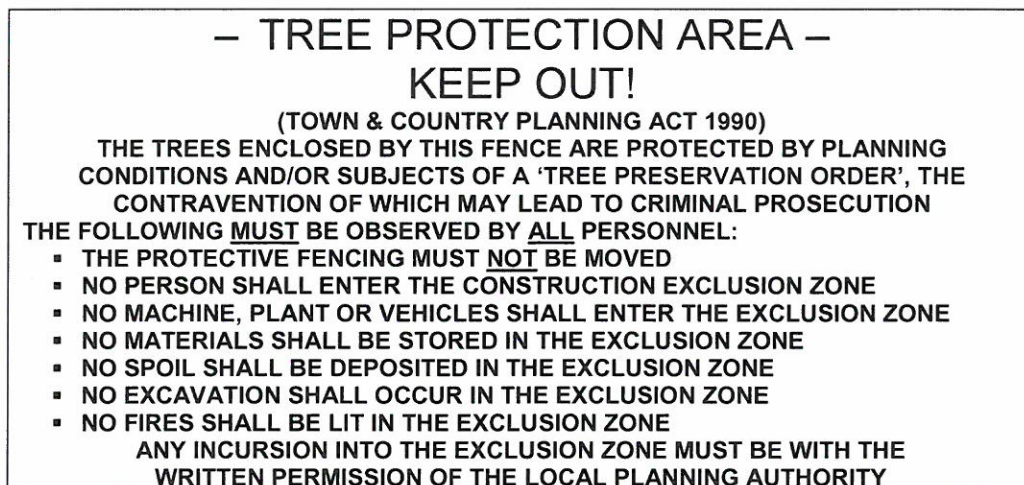


Figure 2: BS5837:2012 Default specification for protective barrier

