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GM TREE CONSULTANTS

STAGE 1
ARBORICULTURAL REPORT WITH
TREE CONSTRAINTS PLAN
&
ARBORICULTURAL IMPACT ASSESSMENT
TO AID IN THE
SITE DESIGN / LAYOUT



CONSULTING ARBORIST: **GARY MARSDEN**
FDSoc Arb M.Arbor.A

ARBORICULTURAL REPORT PREPARED FOR: Lisa Cooper-Tomlinson

SITE ADDRESS: New Chapel House
Commons Lane
Balderstone
BB2 7LL



STAGE 1 + AIA BS 5837 Report -- Dated 10th August 2013 - Job Ref. 0423
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Validation statement for council registration of this report

In accordance with the *Department for Communities and Local Government circular 02/2008* and its guidance document *Validation of Planning Applications*, this report fulfils the recommended national list criteria for tree survey/arboricultural information. More specifically, it contains the following:

- A full tree survey compliant to the requirements of *BS5837; (2012) Trees in relation to design, demolition and construction - Recommendations* undertaken by a qualified arboriculturist.
- A plan to a suitable scale with a north point and showing tree survey information, retention categorisation and root protection areas, tree height and ultimate tree height.
- An assessment of the arboricultural impacts of development detailing trees to be retained / removed and appropriate protection measures.



Summary

I have inspected all the relevant trees that could influence the development of this site and listed there details within this report, a minimum root protection zone is indicated around each tree, as no construction would be allowed within the area of any retained tree unless there are specifically approved construction methods to overcome such issues.

This information can now be used to assist the architect in producing there design while still protecting any retained trees in compliance with *BS 5837:2012 Trees in relation to design, demolition and construction - Recommendations*.

All the significant boundary tree cover located on the site will remain intact. The construction activity and proposed changes may adversely affect further trees if appropriate protective measures are not taken. However, if adequate precautions to protect the retained trees as detailed in this report and implemented through the arboricultural method statement, the development proposal will have no adverse impact on the contribution of trees to local amenity or character.

Gary Marsden FDS Sc Arb M.Arbor.A



1.0 Introduction

1.1 Instruction:

I am instructed by Lisa Cooper-Tomlinson (referred to as the 'client' from here on) to inspect any significant trees that could have an effect on the development at New Chapel House, Commons Lane, Balderstone, BB2 7LL and to provide the following information to aid in the design of the site:

- A schedule of the relevant trees to include basic data and a condition assessment as per section 4.4.2.5 of BS 5837:2012 Trees in relation to design, demolition and construction - Recommendations.
- A tree constraints map showing: root protection areas, above ground constraints, crown spreads, retention categories, tree height plus ultimate tree height.

From this data I have also produced an Arboricultural Impact Assessment (AIA) based on the initial tree survey, any designs of the site by the architect or information given by the client.

1.2 Purpose of this report:

This reports primary purpose is to allow the architect to design relevant buildings / site layout while taking into account any impact this will have on the retained trees on site.

Within this planning process, this report will be available for inspection by people other than tree experts so the information is presented to be helpful to those without a detailed knowledge of the subject.

1.3 Qualifications and experience:

I have based this report on my site observations and any provided information and I have come to conclusions in the light of my experience. I have experience and qualifications in arboriculture, and include a summary in Appendix 'A'.

1.4 Documents and information provided:

My client or architect provided me with copies of the following documents or information:

- Their e-mail of instruction outlining the situation;
- Their email commissioning this report and agreeing to the T&C and cost.

1.5 Relevant background information:

Prior to the site survey, my client advised me that:

- An application has been submitted to the local planning authority to construct a horse exercise arena measuring 20m x 60m. this is to be located to the north of the property within the existing garden / fields of the property.
- The local planning officer has requested a tree survey due to the proximity of the trees in relation to the proposed location of the arena.
- I have only been given verbal indication of the size and proposed location of the arena; I have not been given any designs or methods of construction.
- The proposed method of construction told to me by my client is to carry out minimal ground levelling operations and then to construct the arena above the existing ground level. Drainage channels are to be located throughout the arena and directed towards the existing pond to the east of the site.



1.6 Scope of this report:

This report is only concerned with the prominent trees within or around the proximity of the site that could influence the development of this site. It takes no account of any trees outside this remit or any building structural issues. It includes a preliminary assessment based on the site visit and any documents provided, listed in 1.4 above.

The survey is based upon information that was available at the time of the inspection. Further inspections are necessary over time to give a fuller picture of the health of trees.

1.7 Mapping:

Site plans showing all tree locations and any relevant details can be found in Appendix 'D'

1.8 Justification of work:

Where management action / tree surgery are recommended, this is based on maximizing the tree's safe useful life expectancy (SULE), given its current situation or the safety of persons and surrounding targets.

2.0 Limitations

- 2.1 The inspection was carried out from ground level only and relates only to arboricultural aspects. All visual observations and recommendations, relate, to the condition of the trees on the day of the survey. The trees have been assessed with the aid of a Nylon mallet for the purpose of detecting changes in resonance which may indicate that further investigation is required. Any unusual weather conditions, changes in soil, soil levels and changes to surroundings may result in a dramatic change in the trees health.
- 2.2 Due to the changing nature of trees and other site circumstances, this report and any recommendations made are limited to a 12-month period. Any alteration to the site and any development proposals could change the current circumstances and may invalidate this report and any recommendations made.
- 2.3 Trees are dynamic structures that can never be guaranteed 100% safe: even in good condition they can suffer damage under average conditions. Regular inspections can help to identify potential problems before they become acute.
- 2.4 A lack of recommended work does not imply that a tree is safe and likewise it should not be implied that a tree would be made safe following the completion of any recommended work.
- 2.5 This report does not consider the structural condition of existing buildings, nor the impact of existing trees on their foundations. If there are concerns over such matters the advice of a structural engineer should be sought.

3.0 Site visit and observations.

3.1 Site visit:

- I carried out an unaccompanied site survey on 5th August 2013.
- All my observations were from ground level without detailed investigations and I measured all dimensions unless otherwise indicated.



- I did not have access to trees outside the client's boundaries and have confined any observations to what was visible from within the client's property, any dimensions have been estimated.
- The weather at the time of inspection was dull, still and dry, with average visibility.

3.2 Brief site description:

- Commons lane is located in the residential suburbs of Balderstones.
- New Chapel House is on the eastern side of the road and surrounded by fields / rural land.
- The property consists of a large house that is currently occupied and set in a large garden.
- The surrounding topography is relatively flat and the site is not particularly exposed
- No utility services were observed on site.
- No visual inspections of any services were made below ground level.
- There is no known history on this site either personal nor from a third party.

3.3 Identification and location of the trees:

I have illustrated the locations of the significant trees on the digital maps included in Appendix 'D'. These plans are for illustrative purposes only and it should not be used for directly scaling measurements. All the relevant information on it is contained within this report and the provided documents.

3.4 Soil assessment

An assessment of the underlying bedrock profile has been undertaken using the British Geological Survey web site (<http://mapapps2.bgs.ac.uk/geoindex/home.html>) to determine as far as reasonably practicable the presence of any shrinkable clay soils and there possible implications on the design of the development.

From this data it has been determined that the soil is not shrinkable. If a more detailed analysis is required, then this must be undertaken by an expert in soil analysis with access to a specialist laboratory.

3.5 Restrictions:

I have emailed the local arboricultural officer requesting information as to the status of the trees on site in relation to tree preservation orders, Conservation Areas and any other known constraints. As yet I have had no response and due to the deadline for submitting this report I can therefore not confirm or deny any constraints.

If I am contacted in the meantime I will forward any information to yourselves but until this, I advise that you contact the local authority before commencing with any tree works

The Arboricultural Officers details are listed below:

David Hewitt,
Arboricultural Planning and Tree Preservation Officer,
Ribbles Valley Borough Council
Council Offices,
Church Walk,
Clitheroe,
Lancashire,
BB7 2RA



Tel: 01200 414505,

E-mail: david.hewitt@ribblevalley.gov.uk

Tree Preservation Orders (TPO)

A tree preservation order, referred to as a 'TPO', is an order made by a local planning authority ('LPA') in respect of trees or woodlands.

The principal effect of a TPO is to prohibit the: Cutting down, uprooting, topping, lopping, wilful damage, or wilful destruction of trees without the LPAs consent. The cutting of roots is potentially damaging and so, in the Secretary of State's view, requires the LPAs consent.

Anyone who, in contravention of a TPO, wilfully damages a tree in a way that is likely to destroy it is guilty of an offence. Anyone found guilty of this offence is liable, if convicted in the Magistrates Court, to a fine of up to £20,000. In serious cases a person may be committed for trial in the Crown Court and, if convicted, is liable to an unlimited fine.

Conservation Areas (CA)

Conservation Areas are areas of special architectural or historical interest with a character or appearance that is desirable to preserve or enhance. Trees may often contribute to the special character of the area.

All trees in a Conservation Area are subject to controls which enable the LPA to protect the special character of the area created by the trees. If trees have a specific Tree Preservation Order (TPO) on them, then the normal Tree Preservation Order controls apply.

You must give the LPA 6 weeks' notice, in writing, of your intention to do any work to trees in a Conservation Area. You must not carry out any work during the six week period, which starts from the date of receipt of your notification by the council, unless you receive written permission to do so.

Work which is not exempt and is carried out without formal notification or within the six week period without the written consent of the council is illegal. The LPA may prosecute offenders and fines of up to £20,000 for each tree may be imposed by the Magistrates Court in the event of offenders being convicted of an offence. If proceedings are instituted in the Crown Court fines are unlimited. There is a duty to replace any tree removed without permission.

It is strongly advised that prior to undertaking work to tree/s an up to date check is carried out to establish if a TPO / CA is in force on the tree/s.

The information in this report is correct at the time of writing but it is possible that conditions could have been applied to the tree/s after this report was written.

3.5 Collection of basic data:

I inspected each tree and have indicated the numbering on the site map enclosed in Appendix 'D'. I identified obvious hedges and groups where appropriate. For each individual tree, group or hedge, I collected information on species, height, diameter, maturity and potential for contribution to amenity in a development context. I have recorded this information in the tree schedule included as Appendix 'E'.



I stress that my inspection was of a preliminary nature and did not involve any climbing or detailed investigation beyond what was visible from accessible points at ground level. This data collection is fully compliant with the *BS 5837:2012 Trees in relation to design, demolition and construction – Recommendations* set out in subsection 4.4.2.5 of the standard.

4.0 Tree Categorisation

4.0 Guidance:

BS 5837:2012 is published by BSI Standards Limited, under licence from The British Standards Institution, and came into effect on 30 April 2012 and supersedes BS 5837:2005, which has been withdrawn.

BS 5837:2012 provides recommendations and guidance for arboriculturists, architects, builders, engineers, and landscape architects. It is also expected to be of interest to land managers, contractors, planners, statutory undertakers, surveyors, and all others interested in harmony between trees and development in its broadest sense.

The category for the tree is ascertained by following the guidelines in the BS 5837:2012 *Trees in relation to design, demolition and construction – Recommendations* "Cascade chart for tree quality assessment" included with the TCP tree schedule in Appendix 'F'. A brief summary of each category is outlined as follows:

4.1 Category 'A' trees:

This category signifies trees that are of a high quality and value with an estimated remaining life expectancy of at least 40 years. Occasionally a veteran tree, although not in the best condition may warrant this category because of its wildlife and cultural value.

It is essential to retain these trees. The design of the proposed development should take into account the retention of category 'A' trees. A design layout that suggests the removal of category 'A' trees has a high increased risk of planning refusal.

4.2 Category 'B' trees:

This category signifies trees that are of a moderate quality and value with an estimated remaining life expectancy of at least 20 years.

It is important to retain these trees. The design of the proposed development, where feasibly possible, should take into account the retention of category 'B' trees. A design layout that suggests the removal of category 'B' trees has an increased risk of planning refusal.

4.3 Category 'C' trees:

This category signifies trees that are of low quality and value with an estimated remaining life expectancy of at least 10 years, or young trees with a stem diameter below 150mm.

They are generally trees that could remain and are expected to have a safe useful life expectancy of between 10 and 20 years if no development were to occur. However, because of their generally low quality it would not be a great loss if they had to be removed if they were a significant constraint to the design or construction process of the proposed development. Particular attention is drawn to the phrase "significant constraint".



4.4 Category 'U' trees:

This category signifies trees that are in such a condition that they cannot be realistically be retained as living trees in the context of the current land use for longer than 10 years and which should, in the current context, be removed for reasons of sound arboricultural management.

5.0 Root Protection Areas (RPAs)

5.1 Why do we need root protection areas?

Approximately eighty percent of a tree's roots are in the top 600 mm of soil. Therefore any changes in this vital environment including: ground level, soil compaction, physical damage to roots, moisture or levels of contaminants can have a dramatic effect on the health of a tree. At deeper strata alterations in water table and routing of services can cause detrimental, long term, effects.

5.2 Method of calculations:

The area of roots that need to be protected around a tree to try and ensure that it does not suffer damage during the construction process is called the Root Protection Area (RPA).

The RPA is calculated using a formula based upon the diameter of the tree at 1.5 metres high for single stem trees and near ground level for multi-stem trees. At this stage it is generally represented by a circle centred on the trees stem. A small percentage lost from the outside of the circle may be tolerated by the tree or offset in another direction. However, where there are significant existing constraints additional root loss in close proximity near to a tree's stem is likely to have a detrimental effect on the trees health or even complete failure of the root plate.

5.3 How to use RPAs:

The RPAs for the trees in question are indicated in Appendix 'E'. At this point the RPA is only indicative and intended to assist in preparing the design layout.

5.4 Optimum RPA calculation:

If the site conditions prevail it is recommended to increase the size of the RPA to accommodate as much potential rooting area as possible, this it will reduce any conflict with the tree and minimise the chance of rejection / conflict with the planning application / Local Planning Authority.

6.0 Pre Development Appraisal

6.1 Category 'U' trees (Removal):

There are 3 trees recommended for removal these are; T7, T8, and T11. The reasons for removal are due to poor form, suppression or dieback within the tree, details for each tree can be found in the survey data.

6.2 Category 'A' trees:

There is 1 tree that should be retained due to the physiological and structural strengths of the tree and the contribution to the amenity value that they make now and there potential in the future.



6.3 Category 'B' trees:

There is 1 tree that should be retained if feasibly possible in line with the proposed development. Each tree should be assessed as to the impact it has on the development and recommendations drawn from this as to whether removal is an option.

6.4 Category 'C' trees:

There are 7 trees that should be retained but removal is an option if the tree / trees impinge on the proposed development.

6.5 Groups:

There are no groups located on or bordering this site.

6.6 Conflict:

Due to the proposed development not involving any foundations / brickwork construction there will in my opinion be very little conflict with any of the trees surrounding the proposed location. To minimise any impact on the trees rooting system I would recommend that the boundary of the arena nearest the line of trees does not encroach 4m from the stems of the trees. If there is conflict with locating the arena, an option would be to remove the trees 1-11 and replant a new group of trees that are of a better species selection and quality that are in keeping with the surroundings.

6.7 Tree works:

The management options noted in the survey data should be followed so to keep a maintained tree stock on and around this development site, particularly giving clearance from properties and over any adopted roads or footpaths.

7.0 Arboricultural Implications Assessment

7.1 Summary of the impact on trees:

I have assessed the impact of the proposal on the trees / groups by the extent of disturbance in and around the RPAs and the current and future canopy height and spread. All the trees / groups that may be affected by the development proposal are listed in table 1.

Table 1: Summary of the trees / groups that may be affected by the development on this site if the current proposed plans are implemented.

Impact	Reason	Important trees		Unimportant trees	
		A	B	C	U
Trees / groups to be removed	Building construction, new surfacing, tree quality and / or, proximity	#	#	#	T7 T8 T11



Trees / groups that may be adversely effected by the tree canopy or through disturbance to RPAs	Removal of existing surfacing / structures / landscaping and or installation of new surfacing / structures / landscaping	#	#	#	#
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7.2 Category A and B trees to be removed:

There are no category 'A' trees located on or immediately adjacent to the site that are to be removed.

There are no category 'B' trees located on or immediately adjacent to the site that are to be removed.

7.3 Category A and B trees that may be adversely affected through RPA disturbance:

There are no category 'A' trees located on or immediately adjacent to the site that may be adversely affected through RPA disturbance.

There are no category 'B' trees located on or immediately adjacent to the site that may be adversely affected through RPA disturbance.

These trees are considered important for retention and have potential to contribute to amenity, so any adverse impacts on them should be minimised. I have reviewed the situation carefully and my experience is that these trees could be successfully retained without any adverse effects if appropriate protective measures are properly specified and controlled through a detailed arboricultural method statement.

7.4 Category C trees to be lost:

There are no category 'C' trees located on or immediately adjacent to the site that are to be removed.

7.5 Retained category C trees that may be adversely affected through RPA disturbance:

There are no category 'C' trees located on or immediately adjacent to the site that may be adversely affected through RPA disturbance.

7.6 Presence of Tree Preservation Orders (TPO) or Conservation Area Designation:

The presence of a Tree Preservation Order / CA / other constraints, has not been confirmed or denied regarding the trees within the proposed development site at the time of writing this report due to time constraints. It is recommended that this is checked before any tree works are undertaken to avoid any conflict with the local authority.

7.7 Effects of new buildings on amenity value on or near the site:

The effect of the new construction on this site have been assessed and have been found not to have any significant effect on the amenity value of the remaining trees on site

7.8 Below ground constraints:

No construction of foundations or the installations of services are to take place within any Root Protection Area (RPA).



Minimal levelling and groundwork's will take place around the trees but if a 4m perimeter is maintained around the trees there is no significant foreseen conflicts due to the proposed method of construction and the end use of the site.

7.9 Above ground constraints:

No conflict with above ground constraints are foreseen with the planned proposal.

7.10 Construction processes of the proposed development:

Development processes that lead to soil compaction in tree rooting zones and physical damage to trees can adversely affect long-term tree health. This can lead to unnecessary tree loss if not controlled properly on site during the demolition of a building and then the construction phases that follow.

An exclusion area of 4m is recommended to prevent access to the RPAs of any retained tree before or during construction activity unless the RPA falls within an already existing tarmac road. Therefore there is no risk of machinery causing damage to roots, trunks and low branches.

The processes of construction are highly unlikely to have a detrimental effect upon the health of the retained trees assuming recommendations made in this report are adhered to at all times by the contractors e.g. the positioning of a stout fence between the retained trees construction activities is placed prior to commencement of works and remains intact and in position throughout the duration of the construction activities.

7.11 Modifications proposed to accommodate trees:

There are no modifications required with this site.

7.12 Infrastructure requirements – highway visibility, lighting, CCTV, services etc:

The installation of services within the rooting zones of trees can have a large detrimental impact on the long-term survival of retained trees leading to their unnecessary loss or root failure in high winds.

No services are to be installed within any tree RPA.

The trees on site do not have any impact on highway visibility.

Undisclosed sighting of above ground services, CCTV cameras, electrical sub-stations, refuse stores, lighting and other infrastructure requirements can lead to unnecessary pruning of tree crowns or root loss during or post development. There are no such developments planned to take place adjacent or within the RPA of any retained trees.

7.13 Mitigating tree loss / new planting:

As yet there are no proposed replacement trees to be planted. Any replacement trees if needed would be selected and located allowing development into a mature tree without the conflict between tree, building or surrounding features.

7.14 Proximity of trees to structures:

With the impact of trees on buildings, and vice versa, allowances for future growth have all been considered in the sighting of the new arena. Tree size, future growth, light / shading, leaf and fruit nuisance etc have received due attention and are not considered to be an issue.



8.0 Proposals to mitigate any impact

8.1 Protection of retained trees:

The successful retention of trees depends on the protection and the administrative procedures to ensure those protective measures remain in place whilst there is an unacceptable risk of damage. An effective means of doing this is through an arboricultural method statement that can be specifically referred to in a planning condition. An arboricultural method statement for this site can be written at an additional commission.

8.2 New planting:

As yet there are no proposed replacement trees to be planted. Any replacement trees if needed would be selected and located allowing development into a mature tree without the conflict between tree, building or surrounding features.

8.3 Summary of the impact on local amenity:

All the significant boundary tree cover located on the site will remain intact. The construction activity and proposed changes may adversely affect further trees if appropriate protective measures are not taken. However, if adequate precautions to protect the retained trees are specified and implemented through the arboricultural method statement, the development proposal will have no adverse impact on the contribution of trees to local amenity or character.

9.0 Other Considerations

9.1 Trees subject to statutory controls:

If any trees are covered by a tree preservation order or located in a conservation area, it will be necessary to consult the council before any pruning works other than certain exemptions can be carried out. The works specified above are necessary for reasonable management and should be acceptable to the council. However, tree owners should appreciate that they may take an alternative point of view and have the option to refuse consent.

9.2 Trees outside the property boundaries:

Any trees that are located in adjacent properties are effectively out of the control of the client / land owner. It will not be possible to easily carry out any recommended works without the full co-operation of the tree owners. The implications of non cooperation require legal interpretation and are beyond the scope of this report. By common law, branches from trees on adjacent properties extending over boundaries can be pruned back to the boundary line without the permission of the owners. However, the material belongs to the tree owner and the same guidance on statutory controls applies as discussed in 8.1 above.

9.3 Development within the rooting area:

The zone of influence has been determined using the calculation outlined in Table 2, of section 5.2.2 of BS 5837:2012 *Trees in relation to design, demolition and construction - Recommendations*. This calculation utilises the diameter of the trunk, at a height of 1.5m from the surrounding ground level; and calculates the root protection area (RPA) by



multiplying the diameter by a value of 12; the result is then used to calculate the total area (m²) of the RPA. The calculations are illustrated in the tree survey data in Appendix 'E'.

9.4 **Construction Exclusion Zone:**

The values indicate the area of soil around the base of the tree to be retained undisturbed. This area should be protected with vertical barriers and considered sacrosanct. Signs should be erected on the fencing to indicate that the area is a Construction Exclusion Zone (CEZ).

9.5 **Arboricultural Method Statement:**

A detailed Arboricultural Method Statement (AMS), outlining the different stages and progression of construction is available as a further commission. This process should be undertaken once the final decision has been made on the proposed structure (if requested by the Local Planning Authority (LPA).

9.6 **Implementation of works:**

All tree works should be carried out to BS 3998 *Recommendations for Tree Work* as modified by more recent research. It is advisable to select a contractor from the local authority list and preferably one approved by the Arboricultural Association. Their Register of Contractors is available free from:

Arboricultural Association
The Malthouse,
Stroud Green,
Standish,
Stonehouse,
Gloucestershire
GL10 3DL, UK
Tel: +44 (0)1242 522152
Email: admin@trees.org.uk
Website: www.trees.org.uk/contractors.htm
Fax: +44 (0)1242 577766

9.7 **Local Arboricultural Contractors:**

If requested I can provide a list of reputable arboricultural contractors that have carried out work on previous projects.

9.8 **Safety:**

Tree works can be a hazardous profession, so it is important that all operatives have the necessary and relevant training, health and safety policy and valid forms of insurance.

9.9 **Statutory wildlife obligations:**

The Wildlife and Countryside Act 1981 as amended by the Countryside and Rights of Way Act 2000, provide statutory protection to birds, bats and other species that inhabit trees. All tree work operations are covered by these provisions and advice from an ecologist must be obtained before undertaking any works that might constitute an offence.

9.10 **Future considerations:**

Any remaining trees should be inspected on a regular basis by a qualified arboricultural consultant.

9.11 **Replanting:**



Any trees on this site that are protected by a preservation order and are being recommended for removal, the appropriate replanting of replacement trees will be needed as a condition of the council granting permission for these trees being felled. This should be incorporated into the landscaping plans at the design stage and followed through after building work is completed.

10.0 Bibliography / References

BS 5837:2012 Trees in relation to design, demolition and construction - Recommendations. – BSI Publication

BS 3998: 2010 Tree work – Recommendations – BSI Publication

[N1]NATIONAL JOINT UTILITIES GROUP (NJUG). *Guidelines for the planning, installation and maintenance of utility apparatus in proximity to trees.*

Volume 4, issue 2. London: NJUG, 2007.

Arboricultural Practice Note (APN) 12 – Through the trees to Development –
Derek Patch and Ben Holding – Arboricultural Advisory and Information Service

Principles of Tree Hazard Assessment and Management – David Lonsdale

The Body Language of Trees – Claus Mattheck and Helge Breloer

Diagnosis of Ill Health in Trees R.G. Strouts and T.G. Winter

A Photographic Guide to the Evaluation of Hazard Trees in Urban Areas – Nelda P. Matheny and James R. Clark



APPENDIX 'A'

Brief qualifications and experience of Gary Marsden:

Qualifications:

- National Certificate in Arboriculture – August 1998
- The Leonard Cheshire Home Award , Practical Award – September 1998
- NVQ in Amenity Horticulture Level 1 – November 2003
- Foundation Degree In Science - Arboriculture - June 2005
- BTEC Higher National Diploma in Arboriculture – June 2005
- Certified Expert Witness by Cardiff Law School / Bond Solon – December 2011

Practical experience:

After qualifying at NC level in arboriculture I gained full time employment with Blackburn with Darwen Borough Council as an Arborist / Climber (September 1998) where I gained a wide range of practical Arboricultural experience ranging from pruning, dismantling and planting.

In January 2004 I was promoted to Team Leader Arborist where I developed my skills in Arboriculture, leadership, organisation and prioritising workloads.

In August 2005 I was promoted to 'Arboricultural Officer' this job involves:

- Health and Safety of all Arboricultural aspects
- Inspection and scheduling of tree complaints
- Tree surveys and report writing
- Staff management

In July 2008 I set up my own tree consultancy company – GM Tree Consultants – which I am constantly developing and evolving.

Continuing professional development:

As a conscious effort to stay in touch with the progression in modern techniques and practices in the arboricultural industry, I attend seminars, receive regular arboricultural literature and maintain membership of professional bodies, examples of which are listed below:

- Arboricultural Association Professional Member since November 2006
- Professional Member of the Consulting Arborist Society since May 2009
- Quantified Tree Risk Assessment licensed user since October 2008
- Attendance of Arboricultural Association annual conferences
- Attendance of specialist short courses in relation to specific fields in arboriculture including: Tree Preservation Orders, Subsidence and mortgage reports, Planning legislation and Tree inspection methods and skills.
- Accredited as an Expert Witness by Cardiff University Law School / Bond Solon since December 2011

A detailed breakdown of qualifications and continued professional development training is available; please contact me directly for this information if requested.



APPENDIX 'B'

Site Location aerial photo:

note – the outline of the area on this image is only indicative and is not to scale





APPENDIX 'C'

Tree survey Index

Tree Locations:

This has been measured using a laser distancing device with a digital compass and plotted on the site plan using tree management software. The accuracy given for the tree stem location is $\pm 1\text{m}$.

Tree Number:

Each surveyed feature is assigned an individual number:

e.g. – Tree A072014013 is made up of:

- 'A' – this represents the tablet pc that was used to record the data
- '07' – this is the month that the inspection was recorded
- '20' – the day of the month when the tree was recorded
- '14' – the hour in the day when the tree was recorded
- '013' – the tree number recorded in that hour of the day (when the hour changes this resets to 001)

Alternatively; each surveyed feature is assigned a number prefixed by a 'T' for individual trees, 'G' for groups of trees and 'H' for hedgerows. It is used to locate the tree in the data survey and the relevant position on the plan.

Species:

The species identification is based on visual observations and the common English name of what the tree appeared to be is listed first. In some instances, it may be difficult to quickly and accurately identify a particular tree without further detailed investigations. The botanical name is followed by the abbreviation sp if only the genus is known.

Measured (M) or Estimated (#)

Trees that have been accurately measured are indicated with an 'm'. Trees that are off site or otherwise inaccessible where accurate data cannot be recovered; these trees are indicated with '#'.

Number of stems:

The number of main stems of each individual tree.

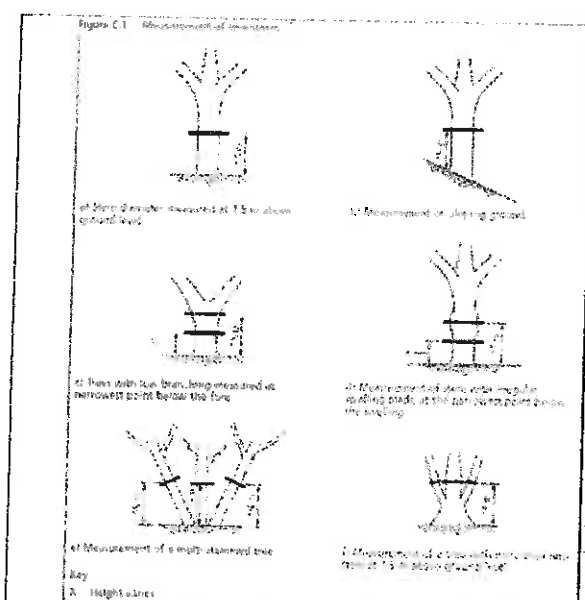
Stem Diameter:

These figures relate to stem diameter in millimetres at 1.5m above ground level. This is accurately measured using a girthing tape, unless access is restricted.

Diameters of single stem trees on level ground are measured in accordance with Figure C.1a).

Diameters of other commonly encountered tree stems are measured in accordance with Figures C.1b) to C.1f).

NOTE - The thick black line indicates where the measurement is taken.





Root Protection Area:

This is the minimum area in m² which should be left undisturbed around each retained tree.

BS 5837:2012

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Annex D
(normative)

Root protection area

The RPAs given in Table D.1 should be used for single stem trees and the equivalent resultant combined stem diameter for multi-stemmed trees.

Table D.1 Root protection areas

Single stem diameter mm	Radius of nominal circle m	RPA m ²	Single stem diameter mm	Radius of nominal circle m	RPA m ²
75	0.90	3	675	8.10	206
100	1.20	5	700	8.40	222
125	1.50	7	725	8.70	238
150	1.80	10	750	9.00	255
175	2.10	14	775	9.30	272
200	2.40	18	800	9.60	290
225	2.70	23	825	9.90	308
250	3.00	28	850	10.20	327
275	3.30	34	875	10.50	346
300	3.60	41	900	10.80	366
325	3.90	48	925	11.10	387
350	4.20	55	950	11.40	408
375	4.50	64	975	11.70	430
400	4.80	72	1000	12.00	452
425	5.10	81	1025	12.30	475
450	5.40	92	1050	12.60	499
475	5.70	102	1075	12.90	519
500	6.00	113	1100	13.20	547
525	6.30	124	1125	13.50	573
550	6.60	137	1150	13.80	598
575	6.90	150	1175	14.10	625
600	7.20	163	1200	14.40	652
625	7.50	177	1225	14.70	679
650	7.80	191	1250	15.00	707

NOTE These figures are derived from the calculations described in 4.6.

NOTE: These figures are derived from the calculations described in 4.6.

Height:

Overall height of tree recorded in meters. Height is recorded using a digital clinometer.

Potential Height of species:

The expected mature height of the tree as a 'species'.

Potential Spread of species:

The expected mature spread of the tree as a 'species'.

Height of first branch and direction:

Existing height in metres of the first significant branch above ground level and the direction of growth in relation to the 4 cardinal points (NSEW).

Height of canopy above ground level:

Existing height in meters of the canopy above ground level.

Branch Spread:

This is measured in meters taken at the four cardinal points (NSEW) to derive an accurate representation of the crown.

Life stages:

Described as young, semi mature, early mature, mature, over-mature / veteran.

Physiological Condition:

Described as good, fair, poor, dead and notes as needed.

Structural Condition:

Described as good, fair, poor, dead and notes as needed.



Preliminary management recommendations:

Practical arboricultural operations that are suggested and described as needed.

Remaining Contribution:

Estimated remaining contribution in years: e.g. <10, 10+, 20+, 30+, 40+. This is based upon Jeremy Barrels" system of SULE (Safe Useful Life Expectancy).

Tree Retention Category Grading:

U or A to C category grading as referenced from BS 5837:2012 Trees in relation to design, demolition and construction - Recommendations. (see Table 1 in appendix 6)



APPENDIX 'D'

Inserted site maps showing tree locations and all other relevant details:

Tree Constraints Plan



Site: Baldernstone, Blackburn
Job Ref. 0423

Date: 8th August 2013
Scale (5 A3): 1:100

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BS937 Tree Retention Category

Blue	Category A Desirable to retain in long term
Yellow	Category B May be desirable to retain in medium term
Orange	Category C Could retain in short term
Red	Category U Unsuitable for retention, Remove

B55637 Tree Retention Value
 1 - Mainly Arboreal Cultural Value
 2 - Mainly Landscape Value
 3 - Mainly Cultural Value
 (Inc. conservation value)

Tree Key		Tree Label Key	
	Root	Tree Ref Number	Species
	Canopy	TDB	Bycann
	Protection Spread	W: 42m	DBH: 424mm
	Area Exposed	Tree	Tree
		Height	Diameter

BS Retention Category & Value	BS B1	BS B2	BS B3	BS B4	BS B5	BS B6	BS B7	BS B8	BS B9	BS B10	BS B11	BS B12	BS B13	BS B14	BS B15	BS B16	BS B17	BS B18	BS B19	BS B20	BS B21	BS B22	BS B23	BS B24	BS B25	BS B26	BS B27	BS B28	BS B29	BS B30	BS B31	BS B32	BS B33	BS B34	BS B35	BS B36	BS B37	BS B38	BS B39	BS B40	BS B41	BS B42	BS B43	BS B44	BS B45	BS B46	BS B47	BS B48	BS B49	BS B50	BS B51	BS B52	BS B53	BS B54	BS B55	BS B56	BS B57	BS B58	BS B59	BS B60	BS B61	BS B62	BS B63	BS B64	BS B65	BS B66	BS B67	BS B68	BS B69	BS B70	BS B71	BS B72	BS B73	BS B74	BS B75	BS B76	BS B77	BS B78	BS B79	BS B80	BS B81	BS B82	BS B83	BS B84	BS B85	BS B86	BS B87	BS B88	BS B89	BS B90	BS B91	BS B92	BS B93	BS B94	BS B95	BS B96	BS B97	BS B98	BS B99	BS B100
BS Retention Category & Value	BS B1	BS B2	BS B3	BS B4	BS B5	BS B6	BS B7	BS B8	BS B9	BS B10	BS B11	BS B12	BS B13	BS B14	BS B15	BS B16	BS B17	BS B18	BS B19	BS B20	BS B21	BS B22	BS B23	BS B24	BS B25	BS B26	BS B27	BS B28	BS B29	BS B30	BS B31	BS B32	BS B33	BS B34	BS B35	BS B36	BS B37	BS B38	BS B39	BS B40	BS B41	BS B42	BS B43	BS B44	BS B45	BS B46	BS B47	BS B48	BS B49	BS B50	BS B51	BS B52	BS B53	BS B54	BS B55	BS B56	BS B57	BS B58	BS B59	BS B60	BS B61	BS B62	BS B63	BS B64	BS B65	BS B66	BS B67	BS B68	BS B69	BS B70	BS B71	BS B72	BS B73	BS B74	BS B75	BS B76	BS B77	BS B78	BS B79	BS B80	BS B81	BS B82	BS B83	BS B84	BS B85	BS B86	BS B87	BS B88	BS B89	BS B90	BS B91	BS B92	BS B93	BS B94	BS B95	BS B96	BS B97	BS B98	BS B99	BS B100



APPENDIX 'E'

Tree survey data inserted including the calculations for the root protection zones:

Job Ref:	0423	Survey Date:	5th August 2013	Site:	New Chapel House, Balderstones	Surveyor:	Gary Marsden	BS:5837 (2012) TREE SURVEY DATA	GM TREE CONSULTANTS	Tel: 077 6166 7394 www.gmtreeconsultants.co.uk																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
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Tree Number	Species (common)	measured (m) or estimated (m)	Number of stems	Single Trunk dia. @ 1.0m (mm)	Second trunk	Third trunk	Fourth trunk	Multiple overhangs	estimated DBH (mm)	Height (m)	Potential height of spread (m)	Potential spread of spread (m)	Height of tree branch (m) & direction (bearing)	Height of canopy above ground (m)	C/N NORTH (m)				C/E EAST (m)				C/S SOUTH (m)				C/W WEST (m)				Life Stage	Y - 5m - 10m - 15m - 20m	Physiological Condition	Structural Condition		Preliminary management recommendations to ensure SILE is at least 10 years	REMAINING CONTRIBUTION	TREE QUALITY ASSESSMENT																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
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APPENDIX 'F'

Cascade chart showing tree retention categories exerted from:
BS 5837:2012 Trees in relation to design, demolition and construction - Recommendations.

BRITISH STANDARD

BS 5837:2012

Table 1 Cascade chart for tree quality assessment

Category and definition	Criteria (including subcategories where appropriate)	Identification on plan
Trees unsuitable for retention (see Note)		
Category 1 Those in such a condition that they cannot realistically be retained as living trees in the context of the current land use for longer than 10 years	- Trees that have a serious, irremediable, structural defect, such that their early loss is expected due to collapse, including those that will become unstable after removal of other category 1 trees (e.g. where, for whatever reason, the loss of companion shelter cannot be mitigated by pruning) - Trees that are dead or are showing signs of significant, immediate, and irreversible overall decline - Trees infested with pathogens of significance to the health and/or safety of other trees nearby, or very low quality trees suppressing adjacent trees of better quality NOTE: Category 1 trees can have existing or potential conservation value which it might be desirable to preserve. See 4.5.7.	See Table 2
Trees to be considered for retention		
Category A Trees of high quality with an estimated remaining life expectancy of at least 40 years	1 Mainly arboricultural qualities 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)	2 Mainly landscape qualities
Category B Trees of moderate quality with an estimated remaining life expectancy of at least 20 years	Trees that might be included in Category A, but are downgraded because of impaired condition (e.g. presence of significant though remediable defects, including unsymmetrical 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	3 Mainly cultural values, including conservation
Category C Trees of low quality with an estimated remaining life expectancy of at least 10 years, or young trees with a stem diameter below 150 mm	Unremarkable trees of very limited merit or such impaired condition that they do not qualify in higher categories	Trees with no material conservation or other cultural value

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APPENDIX 'G'

Table showing generic tree data of commonly found tree species:

<u>Tree "type"</u>	<u>Common name of tree species</u>	<u>Scientific name of tree species</u>	<u>Ultimate height of tree at maturity</u>	<u>Ultimate spread of tree canopy at maturity</u>
Deciduous	Alder	<i>Alnus glutinosa</i>	19m	14m
Deciduous	Ash	<i>Fraxinus excelsior</i>	30m	18m
Deciduous	Apple (all <i>malus</i> spp)	<i>Malus spp</i>	9m	8m
Deciduous	Beech	<i>Fagus sylvatica</i>	30m	20m
Deciduous	Silver Birch	<i>Betula pendula</i>	18m	10m
Deciduous	English Elm	<i>Ulmus procera</i>	30m	20m
Deciduous	Elderberry	<i>Sambucus nigra</i>	10m	8m
Deciduous	Hornbeam	<i>Carpinus betula</i>	19m	10m
Deciduous	Hawthorn	<i>Crataegus monogyna</i>	5.5m	8m
Deciduous	Hazel	<i>Corylus avellana</i>	6m	6m
Evergreen	Holly	<i>Ilex aquafolia</i>	25m	16m
Deciduous	Horse chestnut	<i>Aesculus hippocastanum</i>	30m	20m
Deciduous	Laburnum	<i>Laburnum anagyroides</i>	9m	8m
Evergreen	Larch	<i>Larix decidua</i>	30m	8m
Evergreen	Lawson Cypress	<i>Chamaecyparis lawsoniana</i>	60m	8m
Evergreen	Leyland Cypress	<i>X Cupressocyparis leylandii</i>	30m	8m
Deciduous	London Plane	<i>Platanus x hispanica</i>	30m	20m
Deciduous	Lime (small)	<i>Tilia cordata</i>	30m	16m
Deciduous	Lime (common)	<i>Tilia x europea</i>	39m	16m
Deciduous	Lime (Large)	<i>Tilia platyphyllos</i>	41m	16m
Deciduous	Norway Maple	<i>Acer platanoides</i>	18m	18m
Evergreen	Norway Spruce	<i>Picea abies</i>	36m	10m
Deciduous	English Oak	<i>Quercus robur</i>	30m	20m
Deciduous	Black Poplar	<i>Populus nigra</i>	30m	16m
Deciduous	Robinia	<i>Robinia pseudoacacia</i>	25m	20m
Deciduous	Rowan	<i>Sorbus aucuparia</i>	15m	8m
Deciduous	Sweet chestnut	<i>Castanea sativa</i>	30m	20m
Deciduous	Sycamore	<i>Acer pseudoplatanus</i>	30m	18m
Evergreen	Scots Pine	<i>Pinus sylvestris</i>	36m	10m
Deciduous	Swedish Whitebeam	<i>Sorbus intermedia</i>	10m	10m
Deciduous	Tulip Tree	<i>Liriodendron tulipifera</i>	45m	20m
Deciduous	Whitebeam	<i>Sorbus aria</i>	25m	10m
Deciduous	Wild Cherry	<i>Prunus avium</i>	18m	16m
Deciduous	White willow	<i>Salix alba</i>	25m	18m
Deciduous	Walnut	<i>Juglans regia</i>	30m	18m

Above is a list of the more common trees found and their ultimate height and spread at maturity.

All information is taken from 'Trees in Britain, Europe and North America' by Rodger Phillips. ISBN 0 330 25480 4



I hope that this report provides all the necessary information, but should any further advice be needed please do not hesitate to contact me.

Signed

A handwritten signature in black ink, appearing to read 'G. Marsden', with a long horizontal flourish underneath.

Gary Marsden FDS Sc Arb M.Arbor.A
Professional Member - Arboricultural Association (AA)
Professional Member - Consulting Arborist Society (CAS)

For and on behalf of **GM TREE CONSULTANTS**

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PHASE 1 HABITAT SURVEY

320130536P

PHASE 1 HABITAT SURVEY

Chapel House, Commons Lane, Balderstone, BB2 7LL

Client: Lisa Cooper-Tomlinson

8 August 2013

EED

1. Introduction

A base-line Phase 1 habitat survey was undertaken on a 20 metre section of broadleaved hedgerow and adjacent grassland / pasture at Chapel House, Commons Lane, Balderstone, (NGR: SD 632 324) on Wednesday 7 August 2013 between 09.15 and 11.15. The weather conditions were cool, dry and calm.

The proposed development at the site requires provision of equestrian facilities including stables and a training ring. Part of an existing hedgerow will be removed to accommodate the training ground.

The aim of the phase 1 survey is to make an assessment of the wildlife and habitat interest at the site to enable the local planning authority make an informed planning decision with regard to the likely impact of the proposed works on the nature conservation value of the area.

2. Methodology

Desk Study

A targeted desk study was carried out within a radius of 2.5km of the site; the aim of the desk study is to identify the presence of statutory wildlife sites and records of any legally protected species in the area. The search includes an on-line search of National Biodiversity Network (www.nbn.org.uk), Multi Agency Geographical Information System (www.magic.gov.uk) and Natural England's Nature-on-the-Map (www.natureonthemap.org.uk).

The survey follows the guidance in the Handbook for Phase 1 habitat survey – a technique for environmental audit (JNCC 2010) requiring a site walkover and habitat assessment involving mapping and description of habitats likely to be affected by the proposed works.

Habitat codes in the report are based on the standard NCC alpha-numeric reference codes (Rodwell).

The survey was undertaken by David Fisher (Earthworks Environmental Design – EED); the survey was carried out within the optimal survey period for undertaking Phase 1 surveys.

3. Results

Desk Study

There are several Biological Heritage Sites (BHS) within 2.5km of the site; these include Old Park Wood and Flashers Wood to the east and Jackson's Bank Wood (River Ribble) to the west. There are no BHS sites adjacent to the property or within 0.5km of the site.

Additional searches include NBN records for 10km grid square SD63 and Lancashire Biodiversity Action Plan – Long List of Plant Species (2011).

There are no Lancashire / UK BAP species / habitats recorded on this particular site.

Target notes

The overall aim of the target note is to provide a succinct picture of the nature conservation interest of the site. The following target notes provide a brief summary of the plants and animals observed at this location within 50 metres of the hedgerow:

3.1. Hedgerow

Broadleaved hedge, approximate linear length 100 metres (relevant section for removal is 20 metres).

Mean height 3 metres, mean width 2.75 metres.

Originally a quickthorn hedge (*Crataegus monogyna*), this is the predominant species, the hedge also contains a number of other woody species including common ash (*Fraxinus excelsior*), sycamore (*Acer pseudoplatanus*), blackthorn (*Prunus spinosa*), elder (*Sambucus nigra*) and a small number of small yew saplings (*Taxus baccata*) and some ivy (*Hedera helix*) mostly on ground layer.

Flowering plants growing within 0.5m of the base of the hedge include common nettle (*Urtica dioica*), wood avens (*Geum urbanum*), cleavers (*Galium aparine*), white deadnettle (*Lamium album*), bramble (*Rubus fruticosus* agg.), creeping buttercup (*Ranunculus repens*), common sorrel (*Rumex acetosa*), broadleaved dock (*R. obtusifolius*), ground elder (*Aegopodium podagraria*) and cow parsley (*Anthriscus sylvestris*).

3.2. Semi-improved acid grassland (B1.2)

Sheep-grazed pasture, poorly-drained slightly acidic / neutral grassland.

Common grasses include hairy brome (*Bromus ramosus*), perennial ryegrass (*Lolium perenne*), velvet bent (*Agrostis canina*), creeping bent (*A. stolonifera*). Flowering plants: red clover (*Trifolium pratense*), creeping thistle (*Cirsium arvense*), creeping buttercup (*Ranunculus*), selfheal (*Prunella vulgaris*), broad-leaved willowherb (*Epilobium* sp.) and soft rush (*Juncus effusus*).

3.3. Broadleaved semi-natural woodland (A1.1.1)

Nearby woodland edge, mature trees surrounding a small pond and forming the field boundary. Species include: alder (*Alnus glutinosa*), ash (*Fraxinus*), sycamore (*Acer*), oak (*Quercus robur*), holly (*Ilex* sp.), hawthorn (*Crataegus*), grey willow (*Salix cinerea*) and guelder rose (*Viburnum opulus*).

3.4. Introduced species / garden ornamentals

The nearby garden contains a variety of introduced trees, shrubs and some conifer hedging, species include: European larch (*Larix decidua*), Cypress sp. (*Chamaecyparis* sp.), Leyland cypress (x *Cupressocyparis leylandi*), western hemlock (*Tsuga* sp.), ornamental cherry (*Prunus* sp.), field maple (*Acer campestre*) and silver birch (*Betula pendula*).

3.5. Standing water

There is one shallow pond within the woodland; the pond is approximately 50m from the hedgerow and is and outwith the boundary of the property. The pond appears to be and heavily silted with few marginal plants and is heavily shaded by mature trees.

3.6. Faunal description

A number of woodland bird species were noted during the survey, these include spotted flycatcher (*Muscicapa striata*), robin (*Erithacus rubecula*), blue tit (*Parus caruleus*), long-tailed tit (*Aegithalos caudatus*), chaffinch (*Fringilla coelebs*), treecreeper (*Certhia familiaris*), and woodpigeon (*Columba livia*).

Also noted flying over the site: barn swallow (*Hirundo rustica*) and common buzzard (*Buteo buteo*).

The surveyor has also recorded the following EPS species at nearby properties within recent years:

Barn owl (*Tyto alba*) roosting in stone barn at nearby Lane Ends (SD628 327)

Brown long-eared bat (*Plecotus auritus*) in stone barn at nearby Lane Ends (SD628 327)

Common pipistrelle (*Pipistrellus pipistrellus*) large bat maternity roost in house (SD633 321)

Common pipistrelle maternity roost (Balderstone Primary School (SD 632 323))

4. Evaluation / Impact Assessment

Benefits provided by the hedge

The overall wildlife value of this hedgerow is relatively low in terms of species diversity. The surveyed section of hedgerow (figure 1 - Appendix A) has not been particularly well maintained over recent years and the trees have become 'leggy' with many gaps appearing near the base to a height of about 1 metre; consequently the hedge bottom has become partly trampled by sheep thereby reducing the potential value of the hedge to wildlife.

The greatest benefit provided by the hedge is the production of flowers in spring and early summer (providing nectar and pollen for bees and other insects) and the autumnal fruits (attractive to a wide variety of birds and some insects). The hedge also provides shelter to roosting birds; foraging birds and bats will also use the protection of any linear feature for safety and commuting flight between habitats.

The loss of this section of hedge is unlikely to have any significant effect on nesting wild birds or feeding and foraging bats and there are no significant plant species present. The hedge is surrounded by permanent grassland with low species diversity; those species which are present are mostly common ruderal plants and widespread throughout the district.

The site is not adjacent to a designated wildlife site and there are no records of protected species at this location although several Lancashire / UK BAP are recorded within the 10km grid square (SD 63).

Impacts / risk assessment

The development requires the removal of one 20m section as shown in figures 1 to 7 (Appendix A / B); all neighbouring trees and hedges will be unaffected and there will be no additional loss of woodland habitat at the site.

Access to the site (across an adjoining field) and removal of the hedge will cause some local disturbance whilst the works are in progress therefore timing constraints are required to remove or significantly reduce the impact of the works on nesting birds. The works should be carried out when nesting birds are least likely to be present and must avoid any disturbance to the site between April and July inclusive.

Works should be undertaken during the autumn and winter period and be completed before the bird nesting season begins. Due to the loss of potential bird nesting habitat the optimal period for undertaking these works is September to March.

5. Recommendations

This section outlines the measures that are required to ensure that:

- (1) works are carried out at the appropriate time of year when there is least chance of disturbing, injuring or killing wild birds and their nests (**mitigation measures**)
- (2) enhancement works are undertaken to compensate for loss of habitat (**compensation measures**).

5.1 Mitigation measures (breeding birds)

Avoid carrying out works during the months of April May June and July when nesting birds are most vulnerable to disturbance. The Wildlife and Countryside Act (1981 as amended) gives protection to wild birds (with certain exceptions) their nests and eggs during the breeding season. It is illegal to disturb any wild bird (listed as schedule 1) while it is nest building, at a nest containing eggs or young, or disturb a dependent young.

All tree / shrub removal must take place outside the breeding season (September to March).

5.2 Compensation measures

A key element of Planning Policy Statement 9 (PPS 9) is the emphasis on enhancements. Paragraph 14 states that *'development proposals provide many opportunities for building in beneficial biodiversity or geological features as part of good design. When considering proposals, local planning authorities should maximise such opportunities in and around developments, using planning obligations where appropriate'*.

To compensate for loss of natural nesting sites, alternative nesting opportunities are required as follows:

- (i) **PROVIDE** 4 No. open-fronted birds boxes and 2 No. hole front boxes on nearby buildings
- (ii) **PROVIDE** 8 No. berry-bearing tree species as close to the new development as possible.

Suitable trees and shrub species include: Wayfaring tree (*Viburnum lantana*), elder (*Sambucus nigra*), mountain ash or rowan (*Sorbus aucuparia*), bird cherry (*Prunus padus*), gean or wild cherry (*Prunus avium*), cherry plum (*Prunus cerasifera*), hawthorn (*Crataegus monogyna*), holly (*Ilex aquifolium*), honeysuckle (*Lonicera secies*), willow (*Salix species*), Ivy (*Hedera species*), hazel (*Corylus*).

6. SUMMARY

The main impact of the proposed development will be the removal of a 20 metre section of hawthorn hedge; the main losses will be potential loss of bird nesting and roosting habitat and loss of several woody shrubs and climbers including hawthorn, elder, bramble and ivy. All remaining hedges and woodland edge trees will remain and there will be no significant disturbance to local wildlife if the works are carried out in a sensitive manner and at a time of year that avoids the main bird nesting season.

Mitigation and compensation measures are recommended; these are proportionate to the loss of habitat. Further surveys are not required (ie. Phase 2 habitat survey) and the works should proceed with due care and vigilance to ensure that any nesting wild birds and other wildlife species are not accidentally / deliberately disturbed injured or killed.

7. APPENDIX A



Figure 1: view from west showing 20 metre section of hedge affected by proposed works



Figure 2:

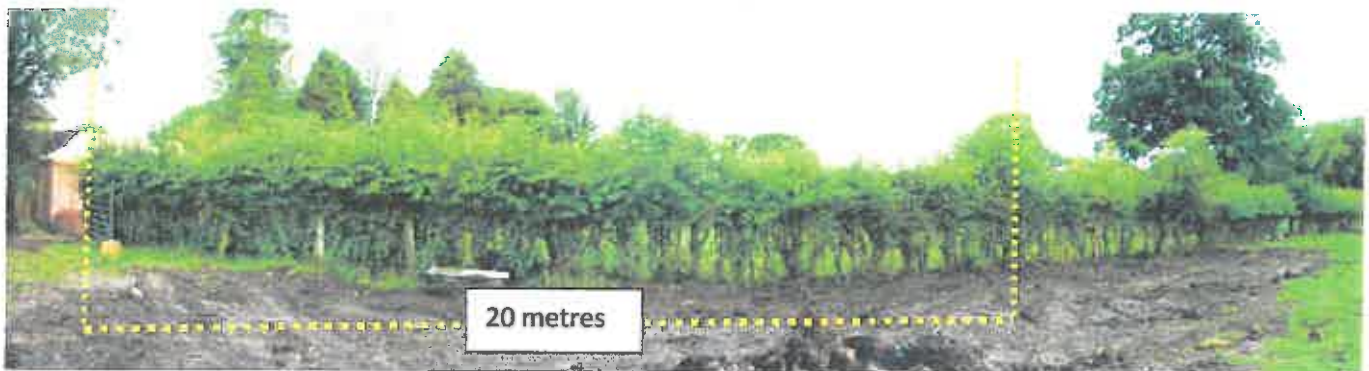


Figure 3: view from east



Figure 4: view from east showing section of hedge within wider context of woodland edge (left) and retained hedgerow

APPENDIX B



Figure 5: hedge row viewed from north-east

Figure 6: view from north-west

Figure 7: Showing key species within hedge:

Ap= sycamore; Cm= hawthorn; Fe= ash; Hh= Ivy Ps= blackthorn; Sn= elder; Tb= Yew

