Ascerta

Landscape, Arboricultural & Ecological Solutions
for the Built Environment

Arboricultural Impact Assessment

Land East of Higher College Farm
Blackburn Road
Longridge
PR3 2YJ

October 2016

Ascerta
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EXECUTIVE SUMMARY

A survey of the existing trees on and adjacent land east of Higher College Farm, Blackburn Road, Longridge has been carried out by a suitably qualified and competent Arboriculturist in accordance with British Standard 5837: 2012 *Trees in relation to design, demolition and construction – Recommendations*.

The purpose of the survey and of this report is to identify the impact of the proposed development of the site on trees, both within and immediately adjacent the site, in accordance with the provisions of BS5837: 2012.

The development of the site will involve the construction of seven blocks of mixed use (office, industrial and storage/distribution), which will require the removal of a number of existing trees and which, in the absence of suitable controls, has the potential to have an indirect impact on a number of the trees proposed for retention.

Mitigation for the impact of the development can be provided in the form of the following:

- The erection of protective fencing in advance of the commencement of the development to safeguard the root systems of retained trees;
- The agreement, in advance of the commencement of the development, together with the implementation during the construction phase, of a methodology for the protection of retained trees; and
- The use of geotextiles and a 'no-dig' construction methodology where proposed hard surfaces overlap with root protection areas.

Compensation for the impact of the development, together with landscape and biodiversity enhancements can be achieved by way of the following:

- The planting of native hedges, where possible, to replace those lost to the development and provide linear habitats that link to habitats located off site; and
- The use of a mixture of native and ornamental species within planting schemes, where those species are suited to the site and local landscape.

1.0 Introduction

1.1 Ascerta has been instructed by BKW Developments Ltd to carry out a survey of the trees within and immediately adjacent land east of Higher College Farm, Blackburn Road, Longridge, and to assess the potential impact of the development as proposed on trees within / adjacent the site in accordance with British Standard 5837: 2012 *Trees in relation to design, demolition and construction – Recommendations.*

1.2 The site was visited on 3rd October, 2016 by Robert Armitage BSc (Hons), a competent and qualified arboriculturist with experience of the UK and European arboricultural and landscape industries within the context of the planning system. During the site visit, a survey was carried out of the trees growing both on and immediately adjacent the site to the standards contained within BS5837: 2012. This report presents the results of the survey, provides an assessment of the impact of the development and includes recommendations for further actions, where applicable, in order to mitigate any potentially negative effects of the development on tree cover within the local landscape.

2.0 Objectives

2.1 Our client's objective is to develop the site by the construction of seven blocks of mixed use (office, industrial and storage/distribution).

2.2 Our objectives are as follows:

- Identify what arboricultural features exist presently within and adjacent the site and to record and categorise them in a manner consistent with BS5837: 2012;
- Identify which trees will need to be removed directly as a result of the proposed development of the site;
- Identify any indirect impact from the proposed development on trees proposed for retention;
- Provide an indication of what protection measures can be implemented as part of the development of the site to ensure the physical protection of retained trees;
- Provide recommendations for mitigation and compensation in terms of new planting or enhancement of existing features of arboricultural, landscape or ecological interest or importance;
- Provide any other recommendations to assist our clients in achieving their objectives whilst satisfying current legislation or policy guidance in relation to the woody vegetation on site.

3.0 Planning Policy & Relevant Legislation

3.1 The National Planning Policy Framework (March 2012) sets out the Government's planning policies for England and how these are expected to be applied. The Framework contains a presumption in favour of sustainable development, with sustainable development in the UK being defined under the UK Sustainable Development Strategy *Securing the Future.* This sets out five 'guiding principles' of sustainable development: living within the planet's environmental limits; ensuring a strong, healthy and just society; achieving a sustainable economy; promoting good governance; and using sound science responsibly.

3.2 The Framework seeks to facilitate the approval, without delay, of developments that meet the objectives of up to date Local Plans. Where proposed developments involve net gains for nature and biodiversity, this is to be seen as a positive improvement in the quality of the natural environment and thus in compliance with the objectives of the Framework.

3.3 The site lies within the Ribble Valley Borough Council administrative area and is subject to the Core Strategy 2008 – 2028 A Local Plan for Ribble Valley. Policies DME1: PROTECTING TREES AND WOODLANDS and DME2: LANDSCAPE AND TOWNSCAPE PROTECTION apply to the subject site in relation to trees and have been taken into account when writing this report.

3.4 Checks made with Ribble Valley Borough Council on 5th October, 2016 via telephone conversation indicate that none of the trees within the site are subject to statutory controls either in the form of a Tree Preservation Order, nor by virtue of their location within a Conservation Area. In advance of the commencement of any works to trees within or adjacent the site, those instructing and proposing to carry out such works should satisfy themselves that all appropriate consents are in place to prevent potential breach of legislation.

3.5 British Standard 5837: 2012 *Trees in relation to design, demolition and construction – Recommendations* provides current recommendations and guidance on the relationship between trees and design, demolition and the construction processes. It sets out the principles and procedures to be applied to achieve a harmonious and sustainable relationship between trees and structures.

3.6 Notwithstanding the aforementioned policies and legislation, consideration should also be given to any impacts from the proposed development in respect of the Hedgerow Regulations 1997 and the Forestry Act 1967 (and specifically the potential need for a felling licence), as well as existing UK and European legislation relating to wildlife and nature conservation.

4.0 Survey & Survey Methodology

4.1 We have been supplied with a digital copy of the Ordnance Survey map for the site and the tree survey was carried out on this map. Features of arboricultural or landscape interest that have been excluded from the original plan (for example trees on or located off site but within a distance from the boundary of the site equal to or less than 12 times the stem diameter of that tree) have been added to the plan manually.

4.2 Our assessment of the soils within the site, based on local site conditions, geography, available soil maps and our own experience of soils across the United Kingdom, indicates that the soils on site are likely to contain a clay element, and that this will have a plasticity index in the low/medium range. Any further details or confirmation of the exact nature of soil conditions on site will require further, more rigorous sampling and analysis. It is not however anticipated that the clay content will cause specific issues relating to retention of trees given the impact of the development proposals, providing that consideration is given to this aspect in advance of and during the construction phase of the development. Provision will need to be made for the protection of soil structure in key areas during the construction phase and the repair of any damage post construction. Further details are provided throughout this report and final details can be secured via planning condition.

4.3 Our survey of the trees within and adjacent the site was carried out by a qualified and competent arboriculturist in accordance with sections 4.4 and 4.5 of BS5837: 2012 on 3rd October, 2016 during sunny, dry weather conditions. Those trees surveyed have been numbered sequentially, although for the purposes of this project they have not been tagged. The trees have also been categorised in accordance with section 4.5 and Table 1 of the Standard.

4.4 Where relevant and where the quality of shrub masses and hedges justifies recording, details have been recorded to the tree survey plan and tree data tables.

4.5 Where trees are surveyed that require immediate attention, for example to abate a nuisance, prevent a serious hazard to life or property, or are affected by a pathogen or pest that could cause widespread damage unless it is controlled, notification will be issued to the relevant person or organisation such that appropriate action can be taken.

4.6 Root Protection Areas for those trees surveyed have been calculated in accordance with the formulas within section 4.6 and Annex C of the Standard and can be found within the tree data tables that accompany this report. The tree data tables also contain a key to abbreviations used and the rationale for determining Root Protection Areas for groups of trees and woodlands (where applicable).

5.0 Survey Results & Impact Assessment

5.1 **Existing Tree Cover:** Seven individual trees, two groups of trees and five hedges were recorded during our survey, the details of which can be found within Appendix 1 to this report and cross referenced with drawing P.768.16.01 *Tree Survey*.

5.2 **Direct Impact on Trees:** The development of the site as proposed will directly require the removal of H1 (in part), H2 (in part), T4, G1 in (part) and H4 (in part).

5.3 **Indirect Impact on Trees:** In the absence of suitable controls, the development may well have an indirect impact on a number of trees on and adjacent the site. Measures are therefore required during the construction phase, as described throughout this report, in order to safeguard retained trees for the long term benefit of the landscape.

5.4 **Context in the Wider Landscape:** The wider landscape predominantly comprises agricultural fields with established boundary hedges and occasionally emerging mature trees. Considering the development proposals only require the removal of small sections of hedging, which can be replaced elsewhere on site, the direct impact of the development is considered likely to have a negligible impact on the extent of canopy cover within the wider landscape.

5.5 **Hedgerows:** In accordance with the Hedgerow Regulations 1997, 'important' hedgerows (in the context of the Regulations) should not be removed without a Hedgerow Removal Notice issued by the relevant Local Authority, unless that removal is subject to an appropriate consent under the Town and Country Planning Act 1990. Appropriate checks should be made in advance of the commencement of works to establish the importance or otherwise of hedgerows on or within influencing distance of the site and whether there is a requirement for a Hedgerow Removal Notice distinct from any formal planning consent to be granted.

5.6 **Potential Mitigation for Development Impacts:** Mitigation of the impacts from the development of the site can be provided in the form of replacement of trees lost to the development, the erection of protective fencing to an agreed specification in suitable locations in advance of the commencement of the development and the use of site specific actions adopting modern methods of construction as agreed and documented within an appropriate Arboricultural or Tree Protection Method Statement, further details of which can be found throughout this report and annotated on drawing P.768.16.02 *Tree Constraints & Draft Protection Drawing.*

5.0 Survey Results & Impact Assessment (Continued)

5.7 **Potential for Shading & Nuisance:** Mature trees in urban and suburban areas add significant value and environmental benefits to properties; however, it is acknowledged that some land / property owners are averse to retaining trees close to buildings and areas of public use because of shading and other potential nuisances (leaf / fruit drop for example). Whilst efforts can be made to minimise the impact from shading by trees, it is almost inevitable that in some situations, whether in the short term from existing trees or in the long term from new trees, trees will cast shade on parts of properties, whether that be buildings, garden / open space or other areas of general use during part of the day. Generally, any shade cast from trees will be for relatively short periods and entirely acceptable given the accepted co-existence of large trees in an urban context. The acceptability or otherwise of shade is a somewhat subjective issue driven largely by land or property owner / occupier perceptions and in the majority of cases is not necessarily something that should be determined by a local planning authority. We do not consider in this case that shade will be excessive, or that any other ordinary circumstance arising from the presence of trees, for example from leaf or fruit drop, will constitute an unacceptable nuisance.

5.8 **Boundary Screening:** Trees located adjacent to the boundaries of the site make a welcome contribution to the screening of views and can be complemented by the planting of new trees and shrubs such as to filter views and integrate the development into the surrounding landscape.

5.9 **Long Term Spatial Constraints:** The proposed layout has been designed to meet the standards set by the local planning authority and is such that, where applicable, there should generally be adequate space between new buildings and trees to limit the potential for future pressure to remove trees. Whilst it is not possible to predict what actions future occupiers will seek to take in respect of trees within or adjacent properties, the existing layout is considered acceptable from a design perspective and contributes to a balanced landscape.

5.10 **Existing Areas of Hard Standing:** There are no existing areas of hard standing located close to trees proposed for retention, therefore subject to the agreement and implementation of physical protection for those trees throughout the ground works / remediation stage of the project, there should be no arboricultural implications associated with the removal of such surfaces.

5.11 **Existing buildings/structures to be removed:** The absence of any built form to be removed from site will ensure that retained trees are not at any particular risk from the demolition or remediation process.

5.12 **Proposed Areas of Hard Standing:** Areas where proposed hard surfaces encroach within or are immediately adjacent root protection areas of retained trees are marked on drawing P.768.16.02 *Tree Constraints & Draft Protection Drawing* appended to this report; specific areas requiring attention in this regard are located within the root protection areas of T2, T3, H3, G1, H4, T5 and T6. The extent of precautionary measures and special construction methodologies required in order to safeguard the trees are also indicated on the drawing, all final details of which should be subject to a methodology agreed in advance of the commencement of the development.

5.0 Survey Results & Impact Assessment (Continued)

In the case of T6, considering its age and poor condition, it may be a more sustainable option to agree the removal of the tree with the owner and plant a replacement tree elsewhere on site. The tree is showing a progressed stage of decline and is likely to only have a valuable and safe remaining life expectancy of around 10+ years, which may be further reduced by any uncontrolled construction works within and around the root protection area.

5.13 **Proposed Buildings Located Adjacent / Within Root Protection Areas:** Drawing P.768.16.02 *Tree Constraints & Draft Protection Drawing* appended to this report indicates areas where proposed built structures encroach within or are located immediately adjacent root protection areas of retained trees. The drawing also suggests appropriate measures for the safeguarding of retained trees, the final details for which should be agreed in advance and documented within a suitable Method Statement. Specific areas requiring attention in this regard are located within and/or adjacent the root protection areas of T1, T6 and G1.

5.14 **Proposed Drainage & Domestic Services:** At the planning application stage of the project, details of proposed drainage arrangements and provision of utility services are generally not known. During the installation process however, general guidance can be obtained from the National Joint Utilities Group publication *Guidelines for the Planning, Installation and Maintenance of Utility Apparatus in Proximity to Trees – Volume 4* such as to minimise the impact of works on retained trees.

5.15 **Working Space During the Construction Phase:** The site is of a size such that there will be adequate working space throughout the construction phase, with little if any potential impact on retained trees. However, it is essential that construction exclusion zones created to safeguard retained trees are not breached without prior consideration and implementation of control measures to limit any potentially negative impacts on trees.

5.16 **Access Facilitation Pruning:** Canopies of boundary hedges will need to be pruned back in advance of any construction or remediation works in order to avoid any associated unnecessary canopy damage. Likewise, low hanging branches of trees adjacent areas proposed for construction works will need to be pruned away from the working area to allow an adequate clearance as to avoid canopy damage. Providing that these works are controlled and carried out to a minimum of the standards as contained within BS3998: 2010 *Tree work – Recommendations*, then the visual impact of the work will be minimal and will not detract from the overall landscape value of the site.

5.0 Survey Results & Impact Assessment (Continued)

5.17 **Protection of Planting Areas:** It is often desirable to fence off areas that are to be newly planted to protect the soil structure; however, works will be required across the majority of the site, therefore there is little scope to set aside areas for such treatment. Provided that adequate provisions are made for ground preparations in advance of the landscape stage, there is unlikely to be a negative impact on the viability of newly planted stock.

5.18 **Requirement for an Arboricultural Method Statement:** It would be beneficial to agree and implement a Method Statement for Tree Protection (an Arboricultural Method Statement) to ensure that retained trees are adequately protected from the outset and that no unnecessary harm occurs during the construction phase. Section 6 of this report contains further details of the aspects of the development that could successfully be controlled, which can in turn be subject to a suitably worded planning condition.

5.19 **Planning for New Landscaping:** If not considered carefully at the design stage, new planting and landscaping can have an adverse impact on existing trees and cause long term problems for the built environment. Care should be taken in the design of new landscapes to prevent physical damage to retained trees during the planting process, and to ensure that schemes are designed to survive and thrive rather than compete for resources. Similarly new trees and shrubs should not be planted where they will cause damage to structures, either directly or indirectly in the future. Table A1 at Annex A of the Standard gives advice on minimum distances for new trees from structures to avoid direct damage from future tree growth. Further advice should be sought from the project arboriculturist and a suitably qualified and experienced engineer as to the potential indirect impact of trees on structures in the long term (from clay shrinkage subsidence).

6.0 Tree Protection Measures

6.1 On the basis of the proposed layout and those trees proposed for retention, drawing P.768.16.02 *Tree Constraints & Draft Protection Drawing* shows our preliminary recommendations for the physical protection of retained trees throughout the construction phase. The plan indicates the location of protective barriers, as well as the specification for construction of the protective fencing in accordance with Figures 2 & 3 of the Standard. These barriers will form a construction exclusion zone around the retained trees.

6.2 In addition to the erection of protective fencing, drawing P.768.16.02 *Tree Constraints & Draft Protection Drawing* shows areas where it would be beneficial to agree a tree protection method statement between the project arboriculturist, design & construction teams and the local planning authority tree officer. The method statement will need to address and make allowance for the following:

- All forms of access required to the site;
- Site cabins and storage areas;
- Proposed parking for site personnel;
- Phasing of works;
- Space required for excavations (including foundation excavations);
- Any required special construction techniques (for example provision of porous surfaces);
- The location and construction methodology for installation of services in close proximity to retained trees & hedges;
- Any changes in ground levels and any resulting requirement for retaining structures;
- Proposed root zone enhancement measures;
- Working space for cranes, plant and scaffolding; and
- Management of waste products within the site.

6.3 Over and above the physical tree protection measures that should form the basis for the tree protection method statement, the following details should be provided within the method statement:

- Protection of the soil structure within the proposed planted areas (where applicable);
- Planting operations within the root protection areas of retained trees;
- Any required / additional precautions outside of construction exclusion zones in relation to the treatment & landscaping of garden or open space areas;
- System of arboricultural site monitoring / schedule of site visits and resulting actions.

7.0 Summary of Impacts & Potential Mitigation Factors

7.1 Table 1 below summarises the impacts of the development as proposed on tree cover within and immediately adjacent the site. Comments are also provided on potential mitigation, compensation or special measures required in order to minimise the impact of the development and safeguard trees proposed for retention.

Table 1: Summary of the impacts of the development on trees within / adjacent the site.

Issue	Affecting	Mitigation / Compensation / Special Procedures
Trees / hedges to be removed	H1 (in part), H2 (in part), T4, G1 in (part) and H4 (in part).	Appropriate compensation can be provided by way of new / replacement planting at the landscape stage of the project.
Indirect physical impact on retained trees	Retained trees.	Tree protection fencing should be erected to an agreed specification in advance of the commencement of the development. Key areas where works are proposed within or immediately adjacent root protection areas of retained trees should be subject to a method statement, agreed in advance as a condition of planning consent.
Provision of new hard surfaces	T2, T3, H3, G1, H4, T5 and T6.	Suitable construction methodologies are achievable, with the use of geotextiles / porous surfaces where applicable. Sensitive excavations will be required with an element of root pruning when necessary. Works in this area to be overseen by project arboriculturist.
Construction of new buildings/structures	T1, T6 and G1.	Sections of foundations within and immediately adjacent root protection areas to be excavated sensitively, with machinery located outside of RPAs and roots pruned cleanly back to the soil surface when necessary. Works in these areas of the site to be subject to a tree protection method statement.
Access Facilitation Pruning	Retained trees.	All pruning works should be carried out to a minimum of the standards contained within BS3998: 2010 *Tree work – Recommendations*.
Protective Fencing	To be erected to an agreed specification in advance of the commencement of the development and retained in-situ throughout the course of the construction phase.	

7.2 On the basis of the above and the contents of this report, we consider it appropriate that a Method Statement for Tree Protection be prepared as a condition of planning consent to demonstrate how trees proposed for retention can be suitably safeguarded. The Method Statement should be adopted as a control document by site personnel.

8.0 Conclusions & Recommendations

8.1 The direct and indirect impacts on tree cover as a result of the development proposals are outlined within this report and mitigation proposed accordingly that seeks where possible to satisfy local and national planning guidance and policy. Where trees are proposed for removal, replacement planting should be undertaken as part of a landscape strategy for the site in line with local plan requirements and to integrate the development into the surrounding landscape. Arrangements for the safeguarding and physical protection of retained trees should be agreed and implemented in a manner consistent with current arboricultural management practices to minimise any potentially negative effects on long term tree cover.

8.2 We recommend that a landscape proposal be prepared for the site, to include where feasible provision for the planting of a mixture of native, as well as ornamental trees, shrubs and hedges, and implemented as a condition of planning consent. We also recommend that tree protection measures are implemented in accordance with a finalised version of drawing P.768.16.02 *Tree Constraints & Draft Protection Drawing* and that a tree protection / arboricultural method statement be prepared and implemented as a condition of planning consent for the development.

9.0 References

Department for Communities and Local Government (March 2012) *National Planning Policy Framework*;

Core Strategy 2008 – 2028 A Local Plan for Ribble Valley;

British Standard 5837: 2012 *Trees in relation to design, demolition and construction – Recommendations*;

National Joint Utilities Group publication *Guidelines for the Planning, Installation and Maintenance of Utility Apparatus in Proximity to Trees – Volume 4*.

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Appendix 1

Site:	**P.768.16 Land East of Higher College Farm, Blackburn Road, Longridge**	Surveyor:	**Robert Armitage**
Client:	**BKW Developments**	Survey Date:	**3rd October, 2016**
Brief:	**Tree Survey to BS5837:2012**	Survey Conditions:	**Sunny, Dry**

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T. No	Species	Ht (m)	Stem DBH (mm)	RPA Radius (m)	Branch Spread				Ht Crown Clearance (m)	Age Class	P Condition	Structural Condition & General Comments	Preliminary Recommendations (not to be actioned without a valid planning consent)	Est. (yrs)	Cat Grade
					N	S	E	W							
H1	Hawthorn, Hazel, Elm, Alder, Holly, Blackthorn, Privet and Ash	2	180 average	2.16	0.5	0.5	0.5	0.5	0	EM/M	F	Partly maintained linear boundary feature with mixed species. Sections of Privet and Holly, but predominantly mixed species.	Remove section to accommodate construction of new access road. Plant replacement section elsewhere on site.	40+	**B2**
T1	Oak	12	900#	10.80	5	6	5	5	1	M	F/G	Dense ivy colonisation throughout entire stem and scaffold branches.	May require some element of crown lifting and minor branch tip reduction away from the adjacent construction area.	40+	**B2/A2**
T2	Ash	13	600	7.20	4.5	4.5	4.5	4.5	3	EM/M	F	Located immediately adjacent the boundary. Barbed wire fence engulfed into main stem.	No works required at this stage.	30+	**B2**
H2	Hawthorn, Hazel, Blackthorn, Holly and Sycamore,	4.5	190# average	2.28	0.5	0.5	0.5	0.5	0	EM/M	F	Partly maintained linear off-site boundary hedge, growing under the canopy of emerging trees. Becomes more maintained and predominantly Blackthorn towards the southern end.	Remove as required to accommodate new road. Plant replacement hedging elsewhere on site.	40+	**B2**
T3	Sycamore	14	700#	8.40	5	5	5	5	4	EM/M	F	Located approximately 1m from the boundary. Canopy appears full and in good vigour.	No works required at this stage.	30+	**B2**
T4	Oak	14	740	8.88	4.5	4.5	4.5	4.5	3	EM/M	F/G	Balanced open grown canopy appears in good vigour. Partly hollow between lower buttress roots, but no indications of structural problems.	Remove to accommodate the new road. Plant replacement tree elsewhere on site.	30+	**B2/A2**
T5	Ash	18	950	11.40	9	9	9	9	3	EM/M	F/G	Bifurcates into two main leaders at 6m with strong U shaped union. Canopy appears full and in good vigour.	No works required at this stage.	30+	**B2/A2**
H3	Hawthorn, Elder, Sycamore and Holly	5.5	180	2.16	3	3.5	2	2	0	EM/M	F	Unmaintained predominantly Hawthorn hedge with occasional Elder and Holly.	Remove section to accommodate new road. Plant replacement hedging elsewhere on site.	30+	**B2/C2**

NOTE: The Category Grade applied to trees surveyed is consistent with the recommendations within Table 1 of BS5837: 2012, however this does not necessarily correlate with the visual importance of a tree within the wider landscape, nor does it dictate which trees should be retained at the cost of quality development. Where trees are to be lost to accommodate a development, recommendations will be made such as to provide suitable mitigation and compensation, and to integrate the development into the wider landscape.

Key to Abbreviations & Headings

T. No.: Tree number (T = Tree, G – Group, W = Woodland, H = Hedge, Cpt. = Compartment)
Stem DBH (Diameter at Breast Height): Measured at 1.5m above ground level*
Ht Crown Clearance: Canopy ground clearance
Structural Condition: Description of any observed defects
Cat. Grade: Tree quality assessment in accordance with BS5837: 2012

Species: Common name used
Root Protection Area Radius: Root Protection Area as per BS5837: 2012
Age Class: Y = Young, EM =Early Mature, M = Mature, OM = Over mature, D = Dead
Preliminary Recommendations: Made in respect of known / intended use of the site
* For groups of trees, the stem diameter of the largest tree in the group is generally used
# Denotes estimated DBH where access was not possible

Ht: Approximate height of tree from ground level in metres
Branch Spread: Extent of canopy spread in metres to each of the four cardinal points
P (Physiological) Condition: G = Good, F = Fair, P = Poor, D = Dead
Est. (yrs): Estimated remaining contribution in years

Site:	**P.768.16 Land East of Higher College Farm, Blackburn Road, Longridge**	Surveyor:	**Robert Armitage**
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T. No	Species	Ht (m)	Stem DBH (mm)	RPA Radius (m)	Branch Spread N	S	E	W	Ht Crown Clearance (m)	Age Class	P Condition	Structural Condition & General Comments	Preliminary Recommendations (not to be actioned without a valid planning consent)	Est. (yrs)	Cat Grade
G1	Lime	13	550 # average	6.60	4	4	4	4	1	EM	F	Linear group of off-site Lime trees positioned at the side of the adjacent road. Located approximately 0.5 to 1.5m from the site boundary.	No works required.	30+	**B2**
H4	Hawthorn	2	40#	0.48	0.5	0.5	0.5	0.5	0	Y	F	Young, newly planted Hawthorn hedging located off-site. Sparse, relatively low value hedge.	Remove sections to accommodate new road. Plant replacement hedging elsewhere on site.	40+	**C2**
G2	Hawthorn, Pine, Alder, Beech, Ash and Sycamore	19	400# average	4.80	3.5	3.5	3.5	3.5	0.5	Y/EM	F/P	Mixture of trees growing in bog like conditions. Stagnant pools of water, with predominantly Alder. Pines growing at the top of the embankment. Group surrounded by sparse low value Hawthorn hedging. The trees appear to be mainly in decline. Ash is in poor condition with dieback and the Sycamore is also in evident decline. Most Alders also not in good condition. Beech with particularly small leaves and signs of *Phytopthora* at base and several small *Ganoderma* fruiting bodies. Regular wounds on most trees.	Inspect trees annually to assess potential for removal.	20	**C2**
T6	Oak	15	1060	12.72	4.5	6	7	4.5	2	M	F/P	Evident decline. Recent demolition of adjacent shed piled around the root zone. A water logged ditch immediately adjacent the stem. Regular deadwood and evidence of dieback on most branches. Barbed wire is beginning to be engulfed into the main stem.	Potential for removal agreed with owner. If retained, remove larger dead wood branches and inspect annually for developing hazards.	10+/ 20	**C2**

NOTE: The Category Grade applied to trees surveyed is consistent with the recommendations within Table 1 of BS5837: 2012, however this does not necessarily correlate with the visual importance of a tree within the wider landscape, nor does it dictate which trees should be retained at the cost of quality development. Where trees are to be lost to accommodate a development, recommendations will be made such as to provide suitable mitigation and compensation, and to integrate the development into the wider landscape.

Key to Abbreviations & Headings

T. No.: Tree number (T = Tree, G – Group, W = Woodland, H = Hedge, Cpt. = Compartment)
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Age Class: Y = Young, EM =Early Mature, M = Mature, OM = Over mature, D = Dead
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* For groups of trees, the stem diameter of the largest tree in the group is generally used
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Est. (yrs): Estimated remaining contribution in years

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					N	S	E	W							
H5	Hawthorn and Blackthorn	4	100 average	1.20	1	1	1	1	0	Y/EM	F	Partly maintained, gappy, hedge. Becomes more mature flailed hedging towards the western end.	Remove as necessary to accommodate new road. Plant replacement hedging in gaps.	30+	**B2/C2**
T7	Oak	11	750	9.00	6	6	6	6	1.5	EM/M	F/G	Balanced open grown canopy appears in good condition. No evident structural defects. Minor deadwood.	No works required at this stage.	40	**B2/A2**

NOTE: The Category Grade applied to trees surveyed is consistent with the recommendations within Table 1 of BS5837: 2012, however this does not necessarily correlate with the visual importance of a tree within the wider landscape, nor does it dictate which trees should be retained at the cost of quality development. Where trees are to be lost to accommodate a development, recommendations will be made such as to provide suitable mitigation and compensation, and to integrate the development into the wider landscape.

Key to Abbreviations & Headings

T. No.: Tree number (T = Tree, G – Group, W = Woodland, H = Hedge, Cpt. = Compartment)
Stem DBH (Diameter at Breast Height): Measured at 1.5m above ground level*
Ht Crown Clearance: Canopy ground clearance
Structural Condition: Description of any observed defects
Cat. Grade: Tree quality assessment in accordance with BS5837: 2012

Species: Common name used
Root Protection Area Radius: Root Protection Area as per BS5837: 2012
Age Class: Y = Young, EM =Early Mature, M = Mature, OM = Over mature, D = Dead
Preliminary Recommendations: Made in respect of known / intended use of the site
* For groups of trees, the stem diameter of the largest tree in the group is generally used
# Denotes estimated DBH where access was not possible

Ht: Approximate height of tree from ground level in metres
Branch Spread: Extent of canopy spread in metres to each of the four cardinal points
P (Physiological) Condition: G = Good, F = Fair, P = Poor, D = Dead
Est. (yrs): Estimated remaining contribution in years

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Appendix 2

DO NOT SCALE

ALL COORDINATES RELATED TO LOCAL GRID
LOCATED TO OS NG BY BEST FIT TO DETAIL
EXTRACTED FROM OS DIGITAL DATA.

KEY

Existing tree / hedge to be retained

Existing tree / hedge to be removed

Corporation Arms (PH)

Def

Oak House

B 6245

KNOWLE GREEN

Pendle View

PRESTON ROAD

KBURN ROAD

White Lion Farm

1

2

T1

H1

H1

4m Ash
180Ø

T2

H2

T3

7m emerging Sycamore
#300Ø

Sycamore
320Ø

H3

H3

Off site Ash
#360Ø

Becomes more maintained
flailed in this location

H2

H4

T4

T5

G2

G1

H4

T7

7m Ash
#250Ø

H5

H5

T6

Dead Oak
#800Ø

H5

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CLIENT:
BKW Developments Ltd

PROJECT:
Land east of Higher College Farm,
Blackburn Road, Longridge

DRAWING TITLE:
Tree Survey

SCALE:	DRAWN BY:	DRAWING No:	REV:
1:500 @A1	CP		
DATE:	CHKD BY:		
04/09/2016	RA	P.768.16.01	-

S:\All Jobs\768.16 Land east of Higher College Farm, Blackburn Road, Longridge\Drawings\P.768.16.01 Tree Survey

DO NOT SCALE

ALL COORDINATES RELATED TO LOCAL GRID LOCATED TO OS NG BY BEST FIT TO DETAIL EXTRACTED FROM OS DIGITAL DATA.

KEY

Existing tree / hedge to be retained

Extent of Root Protection Area for retained trees in accordance with BS5837: 2012 *Trees in relation to design, demolition and construction - Recommendations*

Proposed location of protective fencing - see inset for type / construction detail

Root protection methodology to be agreed in these areas. Geotextiles/ porous surfacing to be agreed / implemented

Area of encroachment considered acceptable providing an appropriate level of care is exercised during construction works. Works to be overseen by the project arboriculturist to ensure any exposed roots are dealt with appropriately. Tree Protection Fencing not to be breached at any point.

Area of encroachment considered acceptable providing excavations are carried out sensitively with an element of root pruning when necessary.

Sensitive excavations kept as shallow as possible, only removing surface layers of vegetation to accommodate Geo-textiled surface.

Hedge to be pruned back prior to commencement of adjacent construction works to create a more linear, maintained feature.

Removal of off-site hedge and Lime trees to accommodate new road to be agreed with owner. Road to be constructed in part using Geo-textiles if necessary to protect and maintain the root zone of retained Trees within G1.

G2
Potential removal of poor quality trees within group for health and safety. Prune back canopies if necessary

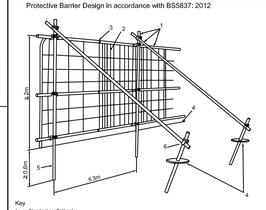
Remove dead Oak. Hazardous tree.

Tree in decline. May be a more sustainable option to seek approval for the removal of the tree with the owner, to avoid future complications associated with the tree's poor condition.

Sensitive excavations kept as shallow as possible, only removing surface layers of vegetation to accommodate Geo-textiled surface.

Area of encroachment considered acceptable providing an appropriate level of care is exercised during foundation construction and that tree protection is not breached at any point.

Protective Barrier Design in accordance with BS5837: 2012



Key
1. Standard scaffold poles
2. Heavy gauge 2 m tall galvanized tube and welded mesh infill panels
3. Panels secured to uprights and cross-members with wire ties
4. Ground level
5. Standard scaffold clamps

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CLIENT:
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PROJECT:
Land east of Higher College Farm, Blackburn Road, Longridge

DRAWING TITLE:
Tree Constraints & Draft Protection Drawing

SCALE:	DRAWN BY:	DRAWING No:	REV:
1:500 @A1	CP		
DATE:	CHKD BY:		
04/09/2016	RA	P.768.16.02	-