ARBORICULTURAL IMPACT ASSESSMENT

of

PROPOSED RESIDENTIAL DEVELOPMENT

at

CHAPEL HILL
LONGRIDGE
LANCASHIRE
PR3

prepared for

UNITED UTILITIES PROPERTY SERVICES
GRASMERE HOUSE
LINGLEY MERE BUSINESS PARK
LINGLEY GREEN AVENUE
WARRINGTON
WA5 3LP

December 2011

Control sheet

Project No.: BOW0054 / BTC114

Project Title: Arboricultural Impact Assessment at Chapel Hill, Longridge

Client: United Utilities

Architects: MCK Associates

Local Authority: Ribble Valley Borough Council

Dates of Surveys: 23rd & 30th December 2009

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DISCLAIMER

Survey Limitations: Unless otherwise stated all tree inspections have been undertaken from ground level using non-invasive techniques only, and the disclosure of hidden crown and stem defects, in particular where they may be above a reachable height or where trees are ivy clad or in areas of ground vegetation, cannot therefore be expected. Where trees are located wholly or partially on neighbouring private third-party land then said land was not accessed and our inspection was therefore restricted to what could reasonably be seen from within the site itself, and stem diameters of trees located on such land are estimated. Any subsequent comments and judgments made in respect of neighbouring third-party trees are based on these restrictions and are our preliminary opinion only. Recommendations for works to neighbouring third-party trees are only made where a potential risk to persons and/or property has been identified during our survey or, if applicable, where permissible works are required to implement a proposed development. Where significant structural defects of third-party trees are identified and associated management works are considered essential to negate any risk of harm and/or damage then we will first attempt to inform the site occupier of the issues and, if not possible, then inform the relevant Local Authority. Where a more detailed assessment is considered necessary then appropriate recommendations are also set out in the Tree Survey Schedule.

Comments upon evident tree safety relate to the condition of said tree at the time of the survey. Unless otherwise stated in the Tree Survey Schedule all trees should be re-inspected annually in order to appraise their on-going mechanical integrity and their physiological condition. It should, however, be recognised that tree condition is subject to change due to, for example, the effects of disease, decay, high winds, nearby development works, etc. Changes in land use and site conditions (e.g. a development that increases access frequency) and the occurrence of severe weather incidents are also significant considerations in respect of tree structural integrity and trees should therefore be re-assessed in the context of such changes and/or incidents and inspected at intervals relative to identified and varying site conditions and associated risks.

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

The potential influence of trees upon buildings or other structures resulting from the effects of their roots abstracting water from shrinkable load-bearing soils is not considered herein. The advice of a structural engineer should be sought with regard to appropriate foundation depths for new buildings with reference to NHBC Standards Chapter 4.2 (NHBC, 2008).

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1.0 INTRODUCTION

Terms of Reference

1.1 Bowland Ecology were commissioned by United Utilities to:

a) Survey from ground level, individually or by group, all trees having reasonable potential to be adversely affected by the proposed site development;
b) Prepare a tabulated Tree Survey Schedule (TSS) based on guidance specified in BS5837:2005 - Trees in Relation to Construction – Recommendations;
c) Assess the tree related impacts of the proposed development;
d) Advise on removal, retention and management options for the trees in the current context and in the context of the proposed development;
e) Annotate the site topographical survey plan to identify tree numbers, retention category grades, crown spreads and Root Protection Areas (RPAs) to indicate tree related constraints in order to produce a Tree Constraints Plan (TCP); and
f) Produce an Arboricultural Impact Assessment (AIA) report outlining the main tree related issues and potential tree related impacts in relation to the development proposal and detail any suitable mitigation measures.

Scope and Purpose of Report

1.2 By detailing foreseeable tree related issues this report is intended to assist the Local Planning Authority (LPA) in their review of the proposed development and, as such, should be supplied to them in support of the planning application to which it pertains. Essentially, the report provides a preliminary analysis of the impacts that the proposed development would potentially have on trees and, in turn, the effects that any such impacts would potentially have on the visual amenity of the local landscape. It also offers guidance on suitable tree management and mitigation and appropriate tree protection measures in the context of the proposed development.

Site Visit, Data Collection and Plan Preparation

1.3 Further to our instruction we confirm that Phill Harris visited the site on 23 and 30 December 2009 and carried out an appraisal of trees, as detailed above and in accordance with the preceding disclaimer. A brief site visit to review the survey was also made on 23 September 2011, during which no significant changes were noted. All tree data collected on site is set out in the attached tabulated Tree Survey Schedule (TSS) at Appendix One which, for ease of interpretation, should be read in conjunction with the associated BS5837:2005 Table 1. Weather conditions on both the survey dates were very cold, overcast and dry, with light winds. There was also a covering of moderately deep snow on the ground on the first date of the survey.

1.4 During the survey we identified 47 individual trees (prefixed 'T'), seven groups of trees (prefixed 'G') and three hedges (prefixed 'H'), and have numbered them T1 to T47, G1 to G7 and H1 to H3, as on the appended Tree Constraints Plan (TCP). The TCP is based on a topographical land survey plan that was provided in electronic format by United Utilities and, for the purpose of this report, we presume the plan details to be accurate.

1.5 The TCP details the existing site with the readily definable tree constraints and an overlay of the development proposal, thereby allowing a preliminary appraisal of the development's potential impacts on trees (see section 6) and a subsequent evaluation of protection, tree work and mitigation requirements. The constraints relating to tree RPAs and their protection requirements are discussed in detail at paragraphs 7.1 and 7.2.

2.0 STATUTORY PROTECTION IN RESPECT OF TREES & ASSOCIATED WILDLIFE

Tree Preservation Orders & Conservation Area Designations

2.1 Section 198 of the Town & Country Planning Act (the Act) 1990 and associated Regulations empower Local Planning Authorities (LPAs) to protect trees in the interests of amenity by making Tree Preservation Orders (TPOs). Section 211 of the Act also affords protection for trees of over 75mm diameter that stand within the curtilage of a Conservation Area (CA). Subject to certain specified exemptions, an application must be made to the LPA in question to carry out works upon or to remove trees that are subject to a TPO, whilst six weeks' notice of intention must be given to carry out works upon or remove trees within a CA and not protected by a TPO. However, in situations where detailed planning permission has been granted and protected trees directly affect the implementation of the approved development, then it is permissible to carry out any works necessary to said trees in order to implement said development.

2.2 We are informed, by UUPS, that none of the surveyed trees are currently afforded protection as part of a TPO. According to the Lancashire County Council 'Maps & Related Information Online' (Mario) website the eastern section of the site stands within a CA and, as such, the points relating to this in paragraph 2.1 should be taken into account when planning for tree works.

Protected Species

2.3 Nesting birds are afforded statutory protection under the Wildlife & Countryside Act (1981) (as amended) and their potential presence should therefore be considered when clipping hedges, removing climbing plants and pruning and removing trees. Hedges provide valuable nesting sites for many birds and clipping should therefore be avoided during March to July. Trees, hedges and ivy should be inspected for nests prior to pruning or removal and any work likely to destroy or disturb active nests should be avoided until the young have fledged.

2.4 All species of bat are protected under Schedule 5 of the Wildlife & Countryside Act (1981) (as amended) and under Schedule 2 of the Conservation of Habitats and Species Regulations 2010. In this respect it should be noted that it is possible that unidentified bat habitat features may be located high up in tree crowns and all personnel subsequently carrying out tree works at the site should therefore be vigilant and mindful of the possibility that roosting bats may be present in trees with such features. If any bat roosts are identified then it is essential that works are halted immediately and that a qualified and an experienced ecologist investigate them prior to works continuing. These issues are considered in more detail in the ecology reports submitted in support of the application.

Felling Licences

2.5 Subject to certain exemptions the Forestry Act (1967) requires that a 'Felling Licence' be obtained to fell growing trees amounting to specific volumes of timber. Felling Licences are administered by the Forestry Commission and contravention of the associated controls can incur substantial penalties. However, we would note that a Felling Licence is not needed for the removal of trees immediately required for the purpose of carrying out a development authorised by detailed planning permission granted under the Act (1990).

3.0 COUNCIL POLICY IN RESPECT OF TREES & WOODLANDS

3.1 The site stands within the administrational boundaries of Ribble Valley BC and, as such, our arboricultural appraisal considers the proposed site development against the relevant Council policies. The Ribble Valley BC District wide Local Plan (Ribble Valley BC, 1998) includes only one Policy (below) specific to trees in relation to this site; 'Policy ENV13 - Landscape Protection'. Ribble Valley BC also have a Supplementary Planning Policy for Trees, of which paragraph 5.5 states that the *"Local Authority will ensure that the right trees are maintained, protected and correctly managed".*

POLICY ENV13 - LANDSCAPE PROTECTION
The Borough Council will refuse development proposals which harm important landscape features including traditional stone walls, ponds, characteristic herb rich meadows and pastures, woodlands, copses, hedgerows and individual trees other than in exceptional circumstances where satisfactory works of mitigation or enhancement would be achieved, including rebuilding, replanting and landscape management.
Reasoned Justification
It is important to protect the existing landscape features which add to the character of the Borough. The woodland coverage of the borough whether large woods, small groups, or individual trees, together with hedgerow coverage forms an important part of the landscape quality. In addition valuable ecological, recreational and economic functions arise from these features.

4.0 THE SITE & THE SURROUNDINGS

4.1 The site in question is located in a residential/rural-edge area to the southern periphery of the town of Longridge, Lancashire, approximately 14.5km due west/south-west of the centre of the Council's administrative town of Clitheroe. It is roughly rectangular in shape and currently consists of fields and several disused buildings, along with various trees, shrubs and hedges.

4.2 The site is bordered to the north and north-west by the B6423 Chapel Hill road, to the north-east by several residential properties, to the east by Chapel Brow, and to the south by a reservoir. Topography is highly variable, rising up considerably from south to north, in particular around the centre of the site. Vehicular access to the site is available from several points off Chapel Hill to the north.

4.3 In the circumstances of the development proposed, it was not necessary to carry out a detailed landscape character appraisal of the locality as part of this assessment. However, we did make a general appraisal of the visual amenity that the trees standing within the site confer in the locality based on their visual prominence and overall contribution to the landscape, as discussed in paragraph 5.1.

5.0 THE TREE POPULATION

5.1 As noted previously, 47 individual trees, seven groups of trees and three hedges were surveyed for the purpose of this appraisal. Of these trees all but T45, T46, T48 and T49 are located within the site boundaries. The four trees in question are located within the neighbouring grass verge, which is evidently under the ownership of Lancashire County Council.

5.2 The majority of the trees are visible from either neighbouring properties of from various public vantage points, with the group of moderate sized trees running in an east-west direction close to the site's centre and the linear group of moderate sized trees running in a north-south direction, also through the site's centre, being the most

visible in the surrounding local landscape and subsequently conferring a high visual amenity. However, some of the trees are small and are largely hidden from wider public view, thereby conferring a low visual amenity in the landscape.

5.3 The surveyed vegetation consists of several deciduous broadleaf, evergreen broadleaf and evergreen coniferous species, including sycamore, goat willow and Leyland cypress. The trees and shrubs are in the young to mature age range and stand at heights of up to approximately 15.5 metres, have maximum diametrical crown spreads of up to approximately 19 metres and stem diameters of up to approximately 900mm. Detailed tree dimensions and other pertinent information such as structural defects and physiological deficiencies are included in the Tree Survey Schedule (TSS) attached at Appendix One. In respect of the TSS it should be noted that tree quality and value is categorised within the existing context without taking into account any site development proposals. However, the recommendations for works included in the TSS take both current site usage into consideration and the proposed site development where there are definable development related issues with regards specific trees.

5.4 The TSS includes a column ('Cat. Grade') listing the trees' respective retention values, where they are rated either 'A', 'B', 'C' or 'R', as per BS5837:2005 Table 1 (Appendix One). In respect of the TSS it should be noted that tree quality and value is categorised within the existing context without taking into account any site development proposals. 'A' category trees are those considered to be of 'high quality and value' and, accordingly, the most suitable for retention and 'B" category trees are those considered to be of 'moderate quality and value'. 'C' category trees are those considered to be of 'low quality and value' which, as stated in BS5837:2005 Table 1*, "will usually not be retained where they would pose a significant constraint on development"*. In turn, 'R' category trees are those that are in relatively poor condition whereby they should be removed for reasons of sound arboricultural management regardless of any plans for the site.

5.5 As such, only those classed either 'A' or 'B' are of a quality and value whereby they may be considered as a potential material constraint in the development process and, in this respect, BS5837:2005 states that *"Certain* ['A' category] *trees are of such importance and sensitivity as to prevent development occurring or to substantially modify its design".* However, it should be noted that the guidance does not state that all trees identified as 'A' or 'B' category have to be retained at all costs. Rather, a more pragmatic approach should be taken whereby the retention values of such trees are considered against the merits of the planned land use changes and they are subsequently afforded appropriate weight in the context of such proposals, with suitable compensatory planting proffered for any necessary losses should this course of action be established to be acceptable.

5.6 As detailed in Table One (overleaf) 26 individual trees were allocated high retention values of 'A', ten individual trees and one group of trees were allocated moderate retention values of 'B' and 11 individual trees, six groups and two hedges were allocated low retention values of 'C'. In addition, two individual trees and one hedge were allocated 'R' category grades and, as such, are therefore recommended for removal in accordance with prudent arboricultural management regardless of site proposals.

Table One: BS5837(2005) Retention Values of the Surveyed Trees

	Ret. Cats.	Tree Numbers	Totals
Trees of a high or moderate quality & value that should be afforded appropriate consideration in the context of development	**'A'**	T4, T5, T6, T7, T8, T9, T12, T13, T14, T17, T18, T19, T20, T21, T22, T23, T27, T29, T31, T33, T34, T36, T37, T41, T43, T46	*26 Individual Trees*
	'B'	T3, T10, T11, T15, T28, T30, T32, T40, T42, T44, G2	*10 Individual Trees 1 Group of Trees*
Trees of a low quality & value that should not be considered a material constraint to development	**'C'**	T1, T2, T16, T24, T35, T38, T39, T45, T47, T48, T49, G1, G3, G4, G5, G6, G7, H2, H3	*11 Individual Trees 6 Groups of Trees & 2 Hedges*
Trees that should be removed for sound management reasons regardless of site plans	**'R'**	T25, T26, H1	*2 Individual Trees & 1 Hedge*
			= 49 Individual Trees, 7 Groups & 3 Hedges in Total

6.0 THE DEVELOPMENT PROPOSAL, ITS PROJECTED ARBORICULTURAL IMPACTS & PROPOSED MITIGATION

6.1 We are informed by the client that the current proposal is for full planning permission for access, landscaping and the erection of 52 new build residential properties, the conversion of the former barn to one dwelling unit, and the refurbishment of an existing residential dwelling unit (i.e. no. 53 Chapel Hill), as per the Site Layout Plan as Proposed (drawing ref. 1010) prepared by project architects MCK Associates and appended at Plan Two. In order to identify the impacts that the proposal would potentially have upon the trees at the site the tree constraints information was compared against the Site Layout Plan as Proposed. In this respect I would note that the Site Layout Plan includes a basic overlay of the existing trees crowns, with those proposed for removal marked with a dashed outline.

Projected Arboricultural Losses Relating to the Proposal & Associated Mitigation

Table Two: Arboricultural Impacts of Proposed Development & Other Tree Removals

	Ret. Cats.	Removals necessary to implement development	Removals recommended for non-development related reasons	Total number of tree removals
Trees of a moderate or high quality & value that should be afforded appropriate consideration in the context of development	**'A'**	T12	-	*1 Tree*
	'B'	T3, T11	-	*2 Trees*
Trees of a low quality & value that should not be considered a material constraint to development	**'C'**	T1, T45, H2, H3		*2 Trees 2 Hedges*
Trees that should be removed for sound management reasons regardless of site plans	**'R'**		T25, T26, H1	*2 Trees 1 Hedge*
Totals		*5 Trees 2 Hedges*	*2 Trees 1 Hedge*	***= 7 Trees & 3 Hedges in Total***

6.2 As detailed in Table Two (above) construction of the proposed development will require the removal of one high quality 'A' category tree, two moderate quality 'B'

category trees and two low quality trees, as well as two low quality hedges. In addition, two 'R' category trees and one 'R' category hedge are recommended for removal in accordance with prudent arboricultural management. Two of these trees, T11 and T12, stand as part of the visually important linear group running in a north-south direction through the centre of the site. However, as the majority of the trees on site are to be retained, in particular most of those to the centre, these losses are projected to have a negligible impact upon the visual amenity that the tree group in question confer on the local landscape. The remainder of the vegetation can evidently be adequately retained in the context of the proposal and protected throughout the development.

Mitigation for Projected Development Related Tree Losses

6.3 As can be seen on the Site Layout Plan as Proposed the site can accommodate a substantial number of new trees as part of the landscaping, and a detailed Landscape Masterplan (prepared by TEP) is supplied in support of the planning application. The Landscape Masterplan includes details for extensive new mostly locally native tree, shrub and hedge planting, the implementation of which would effectively complement the existing landscape and enhance the long-term visual amenity of the locality, as well as provide important urban wildlife habitat. As such, it is evident that the necessary development related tree removals can be adequately mitigated for through the provision of new trees on site. New tree planting is discussed further in paragraph 8.5 and specific tree planting requirements can be conditioned to a planning approval.

7.0 RECOMMENDATIONS FOR SUCCESSFUL TREE RETENTION IN THE CONTEXT OF DEVELOPMENT

Root Protection Areas and Construction Exclusion Zones

7.1 Adequate protection of the Root Protection Areas (RPAs) of retained trees during construction is essential if their long-term viability is to be assured. RPAs, which are calculated through a method provided in BS5837:2005, are ground areas that should be protected by temporary protective fencing as Construction Exclusion Zones (CEZs) throughout the development process, thereby keeping the trees' root zones free from disturbance. Consequently, the RPA distances, as detailed in the TSS (see 8.2, below), give an idea of the on-site below-ground constraints in respect of tree roots and assist in planning for appropriate tree retention in relation to feasible development. In certain situations, there is a limited degree of flexibility in the RPA and CEZ positioning.

7.2 The TSS includes two columns listing the RPAs of the individually surveyed trees and, where applicable, the largest of the trees in any surveyed groups as overall areas in square metres and as radial distances. The radial RPAs are indicated as magenta coloured circles on the TCP. With regards CEZs the design, materials and construction of the fencing should be appropriate for the intensity and type of site construction works, should conform to section 9 of BS5837:2005 and should be agreed with the LPA. A temporary protective fencing specification is included at Appendix Two and the extents of the RPAs should dictate locations of the CEZs.

Underground Utilities

7.3 The installation of underground utilities can cause serious damage to trees roots and it is therefore crucial that this is taken into account during the design layout stages

and ensure that they are routed outside tree RPAs wherever possible. However, in situations where this is not possible and the service route must pass within tree RPAs then it is essential that they be installed using hand digging and/or trenchless installations (e.g. thrust boring) only, in accordance with the guidelines set out in the National Joint Utilities Group publication 'Volume 4: NJUG Guidelines For The Planning, Installation And Maintenance Of Utility Apparatus In Proximity To Trees (Issue 2) – Operatives Handbook' (2007).

Arboricultural Method Statement and Tree Protection Plan

7.4 BS5837:2005 recommends that, where considered expedient, an Arboricultural Method Statement (AMS) and a Tree Protection Plan (TPP) be prepared detailing *"special mitigation construction"* such as the construction of structures within tree RPAs using special methods. Essentially, the AMS and TPP describe the procedures, working methods and protective measures to be used in relation to retained trees in order to ensure that they are adequately protected during the construction process. Production of and adherence to an AMS and TPP can be conditioned to a planning approval if considered necessary.

8.0 OTHER RECOMMENDATIONS

Arboricultural Contractors and General Tree Work Recommendations

8.1 All tree works should be carried out in accordance with 'BS3998:2010 - Tree Work – Recommendations'. All tree works should be carried out by suitably qualified and experienced arboricultural contractors carrying appropriate public liability insurance cover and be implemented to the minimum current CE and UK industry standards and in accordance with industry codes of practice. Only certificated personnel should, in accordance with The Control of Pesticides Regulations, apply any pesticides.

Non-Development Related Tree Works and Recommendations

8.2 Any general management pruning works for retained trees that are stated to be non-development related, as detailed in the TSS, are recommended in accordance with prudent arboricultural management and should therefore be carried out regardless of any site plans and potential changes in land usage.

Tree Work Related Consents

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

Contractors and Subsequently Identified Tree Defects

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

New Tree Planting

8.5 New tree planting should be implemented in mitigation of any tree removals required

for development purposes and subsequent impacts on associated habitats and amenity, and is discussed in more detail in paragraph 6.3. All tree planting should be carried out in accordance with BS4428:1989 - Code of Practice for General Landscape Operations, BS3936-1:1992, Nursery Stock – Part 1: Specification for Trees and Shrubs and BS4043:1989, Transplanting Root-Balled Trees where applicable.

Retained Tree Management

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

9.0 SUMMARY AND CONCLUSIONS

9.1 49 individual trees, seven groups of trees and three hedges were surveyed in respect of a proposal for a residential development at the site in question.

9.2 The surveyed trees are small to moderate in size and confer a low to high visual amenity in the local landscape, dependent on the tree(s) under consideration and the place(s) from where they are viewed. The two groups of trees close to the centre of the site are considered to be the most important in visual terms and, as such, confer a high visual amenity in the local landscape.

9.3 26 individual trees were allocated high retention values, ten individual trees and one group of trees were allocated moderate retention values, and 11 individual trees, six groups and two hedges were allocated low retention values. In addition, two individual trees and one hedge were recommended for removal in accordance with prudent arboricultural management regardless of site proposals.

9.4 From our appraisal we conclude that construction of the proposed development, as per the Site Layout Plan, can be achieved with the removal of one high quality tree, two moderate quality trees and two low quality trees, as well as two low quality hedges. Although two of the trees that are anticipated to require removal stand as part of the visually important linear group, these losses are projected to have a negligible impact upon the local landscape as the vast majority of the most visually important trees at the site can be retained.

9.5 Furthermore, these losses can be more than adequately compensated for through new native tree planting as part of an approved landscape scheme. The proposed landscape scheme would significantly augment tree cover in the locality and, in turn, help assure long-term landscape enhancements.

9.6 The remainder of the vegetation can evidently be adequately retained in the context of the proposal and protected throughout the development, as per the

recommendations in section 7 of this report.

9.7 In consideration of the above I therefore conclude that the scheme complies with the requirements of relevant Council Policy and current Government guidance in respect of trees and development.

REFERENCES AND BIBLIOGRAPHY

BS4428:1989 - Code of Practice for General Landscape Operations. BSI British Standards, London.
BS3936-1:1992, Nursery Stock – Part 1: Specification for Trees and Shrubs. BSI British Standards, London.
BS4043:1989, Transplanting Root-Balled Trees. BSI British Standards, London.
BS5837:2005 - Trees in Relation to Construction – Recommendations. BSI British Standards, London.
BS3998:2010 - Tree Work - Recommendations. BSI British Standards, London.
National House Building Council (2008). NHBC Standards Chapter 4.2 - Building Near Trees. NHBC, Amersham.
National Joint Utilities Group (2007). Volume 4: NJUG Guidelines For The Planning, Installation And Maintenance Of Utility Apparatus In Proximity To Trees (Issue 2) – Operatives Handbook.
Ribble Valley Borough Council (1998). Ribble Valley Borough Council Districtwide Local Plan.

APPENDIX ONE:

TREE SURVEY SCHEDULE & BS5837:2005 TABLE 1

TREE SURVEY SCHEDULE FOR ARBORICULTURAL IMPACT APPRAISAL					
Site:	Chapel Hill, Longridge, Lancashire, PR3	Assessment Dates:	23 & 30 Dec 09 & 23 Sep 11	Page: 1 of 3	
Client:	United Utilities Property Services	Job Reference:	BTC114		

No.	Species	Height	Stem Diam.	Branch Spread	Height of C.C.	Age	PC	Comments on Condition, etc.	Management Recommendations	ERC	Cat. Grade	RPA (m²)	RPA Radius (m)
T1	Sycamore *(Acer pseudoplatanus)*	10	340	N 2 E 3.5 S 3.5 W 4	1.5	SM	G	▪Stem bifurcates into co-dominant sub-stems at a height of approximately 1.0m with an included bark union.	▪Remove in order to construct development as proposed. ▪Grub out stump.	10-20	C1	36.32	3.4
T2	Ash *(Fraxinus excelsior)*	12	900	N 5 E 5 S 5 W 5	3	M	G	▪Stem divides into multiple sub-stems at a height of approximately height 0.2m with included bark unions. ▪Growing in very close proximity to streetlamp.	▪ Ensure protection of RPA throughout development with CEZ.	10-20	C1	254.5	9
T3	Ash	12	650	N 5 E 4 S 5 W 4	2.5	EM	G	▪Stem divides into multiple sub-stems at a height of approximately 0.2m with an included bark union.	▪Remove in order to construct development as proposed. ▪Grub out stump.	20-41	B1/2	132.75	6.5
T4	Sycamore	12.5	690	N 8 E 9.5 S 8 W 9.5	2.5	M	M/G	▪Part of linear group with interconnecting crowns. ▪Large number of young but well established adventitious branches to base. ▪Crown showing signs of a minor reduction in vitality.	▪ Retain in context of proposal and ensure protection of RPA throughout development with CEZ.	20-40	A1	215.41	8.28
T5	Sycamore	14	390	N 2 E 5.5 S 2 W 5.5	2	SM	G	▪Part of linear group with interconnecting crowns. ▪No visible structural defects.	▪ Retain in context of proposal and ensure protection of RPA throughout development with CEZ.	40	A2	47.79	3.9
T6	Sycamore	13	440	N 2 E 5.5 S 2 W 5.5	2.5	SM/EM	G	▪Part of linear group with interconnecting crowns. ▪No visible structural defects.	▪ Retain in context of proposal and ensure protection of RPA throughout development with CEZ.	40	A2	87.59	5.28
T7	Sycamore	13	490	N 3 E 6 S 6 W 5	2	EM	G	▪Part of linear group with interconnecting crowns. ▪No visible structural defects.	▪ Retain in context of proposal and ensure protection of RPA throughout development with CEZ.	40	A2	75.44	4.9

HEADINGS & ABBREVIATIONS

No.	Allocated Tree ('T'), Group ('G'), Woodland ('W') or Hedge ('H') reference number - refer to plan and to numbered tags where applicable
Species:	Common and botanical name in brackets where appropriate
Height:	In metres – where possible approximately 80% are measured using an electronic clinometer and the remainder estimated against the measured trees. In the case of Groups and Woodlands the measurement listed is that of the highest tree
Stem Diam.:	Stem diameter in millimetres - measured or estimated at a height of approximately 1.5 metres above ground level or just above the root flare for multi-stemmed trees. MS = multi-stemmed, TS = twin-stemmed
Branch Spread:	Crown radius measured (or estimated where considered appropriate) from the four cardinal points (north, east, south and west) to derive an accurate representation of the crown
Height of CC:	Height of crown clearance in metres - measured at lowest point above adjacent ground level – to inform on crown to height ratio, potential for shading, etc
Age:	Estimated age class - Y = young, SM = semi-mature, EM = early-mature, M = mature, PM = post-mature
PC:	Physiological Condition - a measure of the tree'(s)' overall vitality, i.e. D = Dead, MD = Moribund, P = Poor, M = Moderate, G = Good
Comments on Condition, etc:	Comments relating to the tree'(s)' overall condition and any other pertinent factors including structural defects, current and potential direct structural damage, physiological decline, poor form, etc
Management Recommendations:	Either Preliminary or In Consideration of the Proposal - In the case of Arboricultural Constraints Surveys the recommended management works only take existing site and tree circumstances and conditions into account and not proposed developments. Arboricultural Impact Assessment and Method Statement related Surveys take the proposed development into consideration with recommendations made accordingly. More than one option may be given if considered appropriate
ERC:	Estimated Remaining Contribution - in years as per BS5837:2005 (i.e. less than 10, 10-20, 20-40, more than 40)
Cat. Grade:	Category Grading - tree retention value listed as R or A to C - broadly in line with BS5837:2005 table 1
RPA m²:	Root Protection Area in m² - calculated area around the tree that must be appropriately protected throughout the development process in order avoid root damage
RPA Radius (m):	Root Protection Area Radius - in metres measured from the centre of the stem to the line of tree protection

TREE SURVEY SCHEDULE FOR ARBORICULTURAL IMPACT APPRAISAL					
Site:	Chapel Hill, Longridge, Lancashire, PR3	Assessment Dates:	23 & 30 Dec 09 & 23 Sep 11	Page: 2 of 7	
Client:	United Utilities Property Services	Job Reference:	BTC114		

No.	Species	Height	Stem Diam.	Branch Spread		Height of CC	Age	PC	Comments on Structural Condition, etc.	Management Recommendations	ERC	Cat. Grade	RPA (m^2)	RPA Radius (m)
T8	Sycamore	10.5	400	N E S W	4 4.5 3 5	3	SM	G	▪Part of linear group with interconnecting crowns. ▪No visible structural defects.	▪Retain in context of proposal and ensure protection of RPA throughout development with CEZ.	40	A2	72.39	4.8
T9	Sycamore	10.5	330	N E S W	2 6 3 5	1.5	SM	G	▪Part of linear group with interconnecting crowns. ▪No visible structural defects.	▪Retain in context of proposal and ensure protection of RPA throughout development with CEZ.	40	A2	34.22	3.3
T10	Sycamore	10.5	260	N E S W	1 3.5 1.5 4	1	SM	G	▪Part of linear group with interconnecting crowns. ▪No visible structural defects.	▪Retain in context of proposal and ensure protection of RPA throughout development with CEZ.	40	B1/2	21.24	2.6
T11	Sycamore	10.5	340	N E S W	2 3 0.5 4.5	2.5	SM	G	▪Part of linear group with interconnecting crowns. ▪No visible structural defects. ▪Moderately biased crown to north due to partial suppression by neighbouring tree(s).	▪Remove in order to construct development as proposed. ▪Grind out stump.	40	B1/2	52.3	4.08
T12	Sycamore	14	560	N E S W	4.5 7 4 5.5	2	EM	G	▪Part of linear group with interconnecting crowns. ▪No visible structural defects.	▪Remove in order to construct development as proposed. ▪Grind out stump.	40	A2	98.53	5.6
T13	Sycamore	10.5	290	N E S W	1 3.5 3 4.5	3.5	SM	G	▪Part of linear group with interconnecting crowns. ▪No visible structural defects.	▪Retain in context of proposal and ensure protection of RPA throughout development with CEZ.	40	A2	26.42	2.9
T14	Sycamore	10.5	310	N E S W	2 5 2 4	3	SM	G	▪Part of linear group with interconnecting crowns. ▪No visible structural defects.	▪Retain in context of proposal and ensure protection of RPA throughout development with CEZ.	40	A2	30.19	3.1
T15	Sycamore	11	320	N E S W	1 6 4 1.5	2	SM	G	▪Moderately biased crown to north due to partial suppression by neighbouring tree(s).	▪Retain in context of proposal and ensure protection of RPA throughout development with CEZ.	40	B1	32.17	3.2
T16	Sycamore	5.5	170	N E S W	0.5 2 2 2	2.5	Y	M	▪Part of linear group with interconnecting crowns. ▪Crown showing signs of a moderate reduction in vitality	▪Retain in context of proposal and ensure protection of RPA throughout development with CEZ.	10-20	C1	13.08	2.04

No.	Species	Height	Stem Diam.	Branch Spread		Height of CC	Age	PC	Comments on Structural Condition, etc.	Management Recommendations	ERC	Cat. Grade	RPA (m^2)	RPA Radius (m)
T17	Sycamore	9	360	N E S W	4 4.5 3 3.5	2	SM	G	▪Part of linear group with interconnecting crowns. ▪No visible structural defects.	▪Retain in context of proposal and ensure protection of RPA throughout development with CEZ.	40	A2	58.64	4.32
T18	Sycamore	10.5	420	N E S W	1.5 5.5 2.5 3.5	0.5	SM	G	▪Part of linear group with interconnecting crowns. ▪No visible structural defects.	▪Retain in context of proposal and ensure protection of RPA throughout development with CEZ.	40	A2	79.81	5.04
T19	Sycamore	10.5	290	N E S W	1 4 1 3.5	2	SM	G	▪Part of linear group with interconnecting crowns. ▪No visible structural defects.	▪Retain in context of proposal and ensure protection of RPA throughout development with CEZ.	40	A2	38.05	3.48
T20	Sycamore	10.5	300	N E S W	1.5 5 1 5	2	SM	G	▪Part of linear group with interconnecting crowns. ▪No visible structural defects.	▪Retain in context of proposal and ensure protection of RPA throughout development with CEZ.	40	A2	40.72	3.6
T21	Sycamore	12.5	410	N E S W	2.5 5.5 2.5 5	2	SM	G	▪Part of linear group with interconnecting crowns. ▪No visible structural defects.	▪Retain in context of proposal and ensure protection of RPA throughout development with CEZ.	40	A2	76.06	4.92
T22	Sycamore	11.5	430	N E S W	2.5 6 2 5	2.5	SM/ EM	G	▪Part of linear group with interconnecting crowns. ▪No visible structural defects.	▪Retain in context of proposal and ensure protection of RPA throughout development with CEZ.	40	A2	83.66	5.16
T23	Sycamore	10	350	N E S W	1 5 5 5	2.5	SM	G	▪Part of linear group with interconnecting crowns. ▪No visible structural defects.	▪Retain in context of proposal and ensure protection of RPA throughout development with CEZ.	40	A2	55.42	4.2
T24	Goat Willow *(Salix caprea)*	10.5	750	N E S W	5.5 5.5 5.5 5.5	0.5	M	G	▪Stem divides into multiple sub-stems at a height of approximately 0.3m with an included bark union.	▪Retain in context of proposal and ensure protection of RPA throughout development with CEZ.	10-20	C1	176.74	7.5
T25	Sycamore	6	200	N E S W	3 3 3 3	1	Y	G	▪Stem base almost in contact with stone wall and will cause structural displacement on incremental growth.	▪Remove due to projected structural displacement to wall. ▪Grind out stump.	10	R	18.1	2.4

No.	Species	Height	Stem Diam.	Branch Spread		Height of CC	Age	PC	Comments on Structural Condition, etc.	Management Recommendations	ERC	Cat. Grade	RPA (m^2)	RPA Radius (m)
T26	Sycamore	6	280	N E S W	3 3 3 3	1	Y/ SM	G	▪Stem base almost in contact with stone wall and will cause structural displacement on incremental growth. ▪Stem divides into multiple sub-stems at a height of approximately 0.2m with acute included bark unions.	▪Remove due to projected structural displacement to wall. ▪Grind out stump.	10	R	24.63	2.8
T27	Sycamore	15	530	N E S W	6.5 5 5 2	3	EM	G	▪Part of group with interconnecting crowns. ▪Stem bifurcates into co-dominant primary branches at a height of approximately 3.5m.	▪Retain in context of proposal and ensure protection of RPA throughout development with CEZ.	40	A2	127.09	6.36
T28	Sycamore	12	360	N E S W	0 2 6 2	2	SM	G	▪Part of group with interconnecting crowns. ▪Highly biased crown to south due to suppression by neighbouring tree(s).	▪Retain in context of proposal and ensure protection of RPA throughout development with CEZ.	40	B1/2	58.64	4.32
T29	Sycamore	15	580	N E S W	7.5 1.5 7.5 2.5	2	EM	G	▪Part of group with interconnecting crowns. ▪Stem bifurcates into co-dominant primary branches at a height of approximately 1.7m	▪Retain in context of proposal and ensure protection of RPA throughout development with CEZ.	40	A2	152.2	6.96
T30	Sycamore	13	490	N E S W	0 2 6 2	2	EM	G	▪Part of group with interconnecting crowns. ▪Stem bifurcates into co-dominant primary branches at a height of approximately 1.7m	▪Retain in context of proposal and ensure protection of RPA throughout development with CEZ.	40	B1/2	108.63	5.88
T31	Sycamore	15.5	600	N E S W	8.5 2.5 6 4	2	EM	G	▪Part of group with interconnecting crowns. ▪No visible structural defects	▪Retain in context of proposal and ensure protection of RPA throughout development with CEZ.	40	A2	162.88	7.2
T32	Sycamore	14	420	N E S W	7 2 5 3	2	SM/ EM	G	▪Part of group with interconnecting crowns. ▪Slightly biased crown due to partial suppression by neighbouring tree(s).	▪Retain in context of proposal and ensure protection of RPA throughout development with CEZ.	40	B1/2	79.81	5.04
T33	Norway Maple *(Acer platanoides)*	15.5	530	N E S W	7.5 3 7 3	1.5	EM	G	▪Part of group with interconnecting crowns. ▪Stem bifurcates into co-dominant primary branches at a height of approximately 2.5m.	▪Retain in context of proposal and ensure protection of RPA throughout development with CEZ.	40	A2	127.09	6.36
T34	Sycamore	15	490	N E S W	6 2.5 6 2.5	1.5	EM	G	▪Part of group with interconnecting crowns. ▪Large number of young but well established adventitious branches at base.	▪Retain in context of proposal and ensure protection of RPA throughout development with CEZ.	40	A2	108.63	5.88

No.	Species	Height	Stem Diam.	Branch Spread		Height of CC	Age	PC	Comments on Structural Condition, etc.	Management Recommendations	ERC	Cat. Grade	RPA (m^2)	RPA Radius (m)
T35	Norway Maple	15.5	420	N E S W	8 4 9 0.5	1.5	SM	M	▪Part of group with interconnecting crowns. ▪1.5 metre long linear bark crack up lower stem. ▪Crown showing signs of a moderate reduction in vitality.	▪Retain in context of proposal and ensure protection of RPA throughout development with CEZ. ▪Monitor physiological condition.	10-20	C1	79.81	5.04
T36	Sycamore	15.5	550	N E S W	8 2.5 8.5 2.5	2.5	EM	G	▪Part of group with interconnecting crowns. ▪No visible structural defects.	▪Retain in context of proposal and ensure protection of RPA throughout development with CEZ.	40	A2	136.87	6.6
T37	Sycamore	15.5	540	N E S W	0 3 8 4	2.5	EM	G	▪Part of group with interconnecting crowns. ▪No visible structural defects.	▪Retain in context of proposal and ensure protection of RPA throughout development with CEZ.	40	A2	131.93	6.48
T38	Norway Maple	12	300	N E S W	0 0 7 4	4	SM	G	▪Part of group with interconnecting crowns. ▪Highly biased crown to south-west due to suppression by neighbouring tree(s).	▪Retain in context of proposal and ensure protection of RPA throughout development with CEZ. ▪Monitor physiological condition.	10-20	C1	40.72	3.6
T39	Ash	10	270	N E S W	0 0 6 7	2.5	SM	G	▪Part of group with interconnecting crowns. ▪Highly biased crown to south-west due to suppression by neighbouring tree(s).	▪Retain in context of proposal and ensure protection of RPA throughout development with CEZ.	40	C1/2	32.98	3.24
T40	Sycamore	16	450	N E S W	3 3 2 4	2	EM	G	▪Part of group with interconnecting crowns. ▪Partially included bark union of branches.	▪Retain in context of proposal and ensure protection of RPA throughout development with CEZ.	40	B1	91.62	5.4
T41	Common Oak *(Quercus robur)*	14.5	360	N E S W	6.5 6 2 1	4.5	SM	G	▪Part of group with interconnecting crowns. ▪Slightly biased crown to north.	▪Retain in context of proposal and ensure protection of RPA throughout development with CEZ.	40	A2	58.64	4.32
T42	Norway Maple	15.5	330	N E S W	4.5 3 2 2	3	SM	G	▪Part of group with interconnecting crowns. ▪Slightly attenuated growth due to close proximity or neighbouring trees.	▪Retain in context of proposal and ensure protection of RPA throughout development with CEZ.	40	B1/2	49.27	3.96
T43	Sycamore	15	540	N E S W	6.5 2.5 3.5 4	2	EM	G	▪Part of group with interconnecting crowns. ▪No visible structural defects. ▪Slightly biased crown to north-west	▪Retain in context of proposal and ensure protection of RPA throughout development with CEZ.	40	A2	131.93	6.48

No.	Species	Height	Stem Diam.	Branch Spread		Height of CC	Age	PC	Comments on Structural Condition, etc.	Management Recommendations	ERC	Cat. Grade	RPA (m^2)	RPA Radius (m)
T44	Sycamore	14	800	N E S W	5.5 3 4 4.5	1	M	G	▪Part of a group with interconnecting crowns. ▪Re-growth from coppice stool with multiple stems arising at ground level with several included bark unions.	▪Retain in context of proposal and ensure protection of RPA throughout development with CEZ.	20-40	B1	201.09	8
T45	Ash	12.5	450	N E S W	5 5.5 5.5 4	1.5	EM	G	▪Located outside boundary wall within a small grass verge and therefore evidently under third party (possibly local authority) ownership. ▪Evidently recent moderate sized secondary branch failure in crown has left a wound to a primary branch, although there are no signs of incipient decay within the wound. ▪Stem in very close proximity to boundary stone wall with area of structure that has partially collapsed, possibly due to incremental stem and/or root growth.	▪Remove in order to obtain necessary highway visibility splays. ▪Grub out stump.	10-20	C1	91.62	5.4
T46	Norway Maple	6.5	210	N E S W	3 2 3 3	0.5	Y	G	▪Located outside site in grass verge and therefore evidently under third party (possibly local authority) ownership. ▪No visible structural defects.	▪Retain in context of proposal and ensure protection of RPA throughout development with CEZ.	40	B1	19.95	2.52
T47	Hawthorn *(Crataegus monogyna)*	4.5	80	N E S W	2 2 2 2	0.5	Y/SM	G	▪Stem abutted up to boundary fence thereby limiting potential for future growth.	▪Remove due to limited potential for future growth. ▪Grind out stump.	10-20	C1	2.9	0.96
T48	Cherry *(Prunus* sp.*)*	5.5	250	N E S W	3.5 3.5 3.5 3.5	0.5	EM	M	▪Located outside site in grass verge and therefore evidently under third party (possibly local authority) ownership. ▪No visible structural defects. ▪Crown showing signs of a moderate reduction in vitality.	▪Ensure protection of RPA throughout development with CEZ.	10-20	C1	28.28	3
T49	Cherry	7	330	N E S W	5 5 3 3	0.5	M		▪Located outside site in grass verge and therefore evidently under third party (possibly local authority) ownership. ▪No visible structural defects. ▪Crown showing signs of a moderate reduction in vitality.	▪Ensure protection of RPA throughout development with CEZ.	10-20	C1	34.22	3.3
G1	5no. Leyland Cypress *(x Cupressocyparis leylandii)*	≤ 10.5	≤ 430	N E S W	≤ 3 ≤ 3 ≤ 3 ≤ 3	≥ 0	SM - EM	M/P-G	▪All trees have included bark unions of branches and/or sub-stems. ▪Tree to north has moderately sparse foliage cover.	▪Retain or remove in accordance with priorities of proposal.	10-20	C1/2	≤ 58.1	≤ 4.3
G2	Approx. 9no. Common Oak, 6 no. Beech, 6no. Silver Birch, 2no. Sycamore, 2no. Willow, 3no. Hawthorn	≤ 12.5	≤ 400	N E S W	≤ 4 ≤ 4 ≤ 4 ≤ 4	≥ 0.5	Y-EM	P-G	▪Closely spaced group with interconnecting crowns. ▪Most trees in young to semi-mature age range. ▪Willows are evidently in decline.	▪Retain in context of proposal and ensure protection of RPA throughout development with CEZ. ▪Thin group by 20%.	40	B1/2	≤ 50.27	≤ 4

TREE SURVEY SCHEDULE FOR ARBORICULTURAL IMPACT APPRAISAL		Surveyor:	Phill Harris – Chartered Arboriculturist	Page: 7 of 7
Site:	Chapel Hill, Longridge, Lancashire, PR3	Assessment Dates:	23 & 30 Dec 09 & 23 Sep 11	
Client:	United Utilities Property Services	Job Reference:	BTC114	

No.	Species	Height	Stem Diam.	Branch Spread	Height of CC	Age	PC	Comments on Structural Condition, etc.	Management Recommendations	ERC	Cat. Grade	RPA (m²)	RPA Radius (m)
G3	3no. Leyland Cypress	≤ 9.5	≤ 280	N ≤ 1.5 E ≤ 2.5 S ≤ 2.5 W ≤ 1	≥ 0.5	Y-SM	M/P-G	▪Closely spaced group with interconnecting crowns. ▪All have included bark union of branches or sub-stems	▪Retain or remove in accordance with priorities of proposal.	10-20	C1/2	≤ 24.63	≤ 2.8
G4	8no. Leyland Cypress, 1no. Common Oak	≤ 10	≤ 500	N ≤ 3 E ≤ 3 S ≤ 5 W ≤ 3	≥ 0.5	SM-EM	G	▪Closely spaced group with interconnecting crowns. ▪All Leyland cypresses have included bark unions of sub-stems. ▪Oak is growing with stem abutted up to that of a Leyland cypress and with highly biased crown to south.	▪Retain or remove in accordance with priorities of proposal.	10-20	C1/2	≤ 78.55	≤ 5
G5	3no. Wild cherry *(Prunus avium)*	≤ 11.5	≤ 450	N ≤ 5 E ≤ 5 S ≤ 5 W ≤ 5	≥ 1	M	G	▪Loose group within area with dense ground vegetated that was not accessed. ▪Stem of tree to centre bifurcates into primary branches at a height of approximately 1.0m with a partially included bark union.	▪Retain or remove in accordance with priorities of proposal.	10-20	C2	≤ 63.63	≤ 4.5
G6	2no. Leyland Cypress	≤ 11	≤ 390	N ≤ 3 E ≤ 3 S ≤ 3 W ≤ 3	≥ 2	SM	G	▪Closely spaced group. ▪Both have included bark unions of branches and/or sub-stems	▪Retain or remove in accordance with priorities of proposal.	10-20	C1/2	≤ 47.79	≤ 3.9
G7	Approx. 10no. Sycamore	≤ 10	≤ 150	N ≤ 2.5 E ≤ 2.5 S ≤ 2.5 W ≤ 2.5	≥ 0.5	Y	G	▪Very closely spaced group of young self-set trees. ▪Thinning would be beneficial.	▪Retain in context of proposal and ensure protection of RPA throughout development with CEZ. ▪Thin group by 40%.	40	C1/2	≤ 10.18	≤ 1.8
H1	Hawthorn	≤ 7.5	≤ 450	≤ 6 wide	≥ 1	PM	D-M	▪Remnant hedge with large spaces between plants. ▪Several trees have recently been cut down to stumps	▪Remove in order to construct development as proposed. ▪Grub out stumps.	≤ 10	R	N/A	N/A
H2	Hawthorn, Ash, Hazel *(Corylus avellana)*, Sycamore	≤ 10.5	n/a	≤ 8 wide	≥ 0	SM	G	▪Length of overgrown hedge along road frontage. ▪Evidently previously laid. ▪Several multi-stemmed trees within which have been surveyed separately.	▪Remove in order to construct development as proposed. ▪Grub out stumps.	10-20	C1/2	N/A	≤ 2
H3	Hawthorn, Ash, Holly, Elder, Wych Elm *(Ulmus glabra)*	≤ 10	≤ 500	≤ 9 wide	≥ 0.5	Y-PM	M-G	▪Length of over grown hedge along road frontage. ▪Several semi-mature multi-stemmed Ash trees within.	▪Remove in order to construct development as proposed. ▪Grub out stumps.	10-20	C1/2	N/A	≤ 5

BS5837:2005 Table 1 – Cascade Chart for Tree Quality Assessment

<table>
<tr><td colspan="5">Trees for removal</td></tr>
<tr><td>Category and definition</td><td colspan="3">Criteria</td><td>Identification on plan</td></tr>
<tr><td>Category R
Those in such a condition that any existing value would be lost within 10 years and which should, in the current context, be removed for reasons of sound arboricultural management</td><td colspan="3">▪ Trees that have serious, irremediable, structural defect, such that their early loss is expected due to collapse, including those that will become unviable after removal of other R category trees such as 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 infected with pathogens of significance to the health and/or safety of other trees nearby, for example Dutch Elm Disease, or very low quality trees suppressing adjacent trees of better quality
Note – Habitat reinstatement may be appropriate. For example R category tree used as a bat roost: installation of bat box in nearby tree.</td><td>Dark Red</td></tr>
<tr><td colspan="5">Trees to be considered for retention</td></tr>
<tr><td rowspan="2">Category and definition</td><td colspan="3">Category – Subcategories</td><td rowspan="2">Identification on plan</td></tr>
<tr><td>1. Mainly arboricultural values</td><td>2. Mainly landscape values</td><td>3. Mainly cultural values, including conservation</td></tr>
<tr><td>Category A
Those of high quality and value: in such a condition as to be able to make a substantial contribution. A minimum of 40 years is suggested.</td><td>Trees that are particularly good examples of their species, especially if rare or unusual, or essential components of groups, or of formal or semi-formal Arboricultural features for example the dominant and/or principal trees within an avenue</td><td>Trees, groups or woodlands which provide a definite screening or softening effect to the locality in relation to views into or out of the site, or those of particular visual importance for example avenues or other arboricultural features assessed as groups</td><td>Trees, groups or woodlands or significant conservation, historical, commemorative or other value for example veteran trees or wood-pasture</td><td>Light Green</td></tr>
<tr><td>Category B
Those of moderate quality and value: those in such a condition as to make a significant contribution. A minimum of 20 years is suggested.</td><td>Trees that might be included in the high category, but are downgraded because of impaired condition. Examples include the presence of remediable defects including unsympathetic past management and minor storm damage</td><td>Trees present in numbers, usually as groups or woodlands, so they form distinct landscape features which attract a higher collective rating than they might as individuals. But which are not, individually, essential components of formal or semi-formal arboricultural features. For example, trees of moderate quality within an avenue that includes better, A category specimens. Or trees which are internal to the site, therefore individually having little visual impact on the wider locality</td><td>Trees with clearly identifiable conservation or other cultural benefits</td><td>Mid Blue</td></tr>
<tr><td rowspan="2">Category C
Those trees of low quality and value: currently in adequate condition to remain until new planting could be established - a minimum of 10 years is suggested - or young trees with a stem diameter below 150 mm</td><td>Trees not qualifying in higher categories</td><td>Trees present in groups or woodlands, but without this conferring on them significantly greater landscape value, and/or trees offering low or only temporary screening benefit</td><td>Trees with very limited conservation or other cultural benefits</td><td rowspan="2">Grey</td></tr>
<tr><td colspan="3">Note – Whilst C category trees will usually not be retained where they would impose a significant constraint on development, young trees with a stem diameter of less than 150mm should be considered for relocation</td></tr>
</table>

APPENDIX TWO:

TEMPORARY PROTECTIVE FENCING & GROUND PROTECTION SPECIFICATION

- TEMPORARY PROTECTIVE FENCING & GROUND PROTECTION SPECIFICATION -

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

1. be protected throughout the development process, as specified in the 'Temporary Protective Fencing Construction' section below and detailed in BS5837:2005 Fig. 2 (overleaf) and, if applicable, as defined by area on the Tree Protection Plan (TPP);
2. be erected prior to any construction, demolition or excavation works and remain in place for the duration of the project;
3. preclude any delivery of site accommodation and/or materials and/or plant machinery;
4. preclude all construction related activity, with the sole exception of specified arboricultural works and any other works to be carried out under supervision that have been agreed by all parties; and
5. preclude the storage of all development related materials and substances including fuels, oils, additives, cement and/or any other deleterious substance.

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

Temporary Protective Fencing Construction

1. Temporary protective fencing panels shall be of at least 2.1 metres in height and, in agreement with the LPA, be either weldmesh "Heras" panels or 18mm thick exterior grade plywood boards.
2. The panels shall butt together and be securely fixed to a scaffold framework, as per 3 to 5 below.
3. The scaffold framework shall comprise of upright poles of at least 3.0 metres in length driven no less than 0.6 metres into the ground at maximum 3.0 metre centres with horizontal and diagonal poles fixed to the uprights, as per 4 to 5 below.
4. The two horizontal rail poles shall be attached to the uprights at heights of 0.6 and 1.8 metres with 3 no. clamps to each joint.
5. The diagonal scaffold pole struts be clamped to the top rail of the scaffold framework at a 45º angle and extend back into the CEZ and clamped to a 0.7 metre length of scaffold tube that shall be driven no less than 0.5m into the ground.
6. No fixing shall be made to any tree and all possible precautions shall be taken to prevent damage to tree roots when locating posts.
7. A 600mm x 300mm warning sign reading "TREE PROTECTION AREA KEEP OUT" (see Fig. 1, overleaf) shall be fixed to every 10.0 metre length of protective fencing.
8. On completion and prior to any demolition or construction works, site preparation, excavation or delivery of plant and materials, the Consulting Arborist shall inspect the Temporary Protective Fencing.

Temporary Ground Protection

1. Any necessary Temporary Ground Protection shall conform to Figure 3 of BS5837:2005 (see overleaf).
2. The Ground Protection Area shall be left undisturbed and covered by a semi-permeable geotextile membrane which shall, in turn, be covered by a compressible layer consisting of a material such as woodchip.
3. Side-butting scaffold boards shall then be fitted to cover the Ground Protection Area.
4. Prior to any demolition or construction works, site preparation, excavation or delivery of plant and materials, the Arboricultural Consultant shall inspect the Temporary Ground Protection.
5. The Temporary Ground Protection shall remain in place until completion of the project and only removed following receipt of written permission from the LPA.

– CONSTRUCTION EXCLUSION ZONE – KEEP OUT!

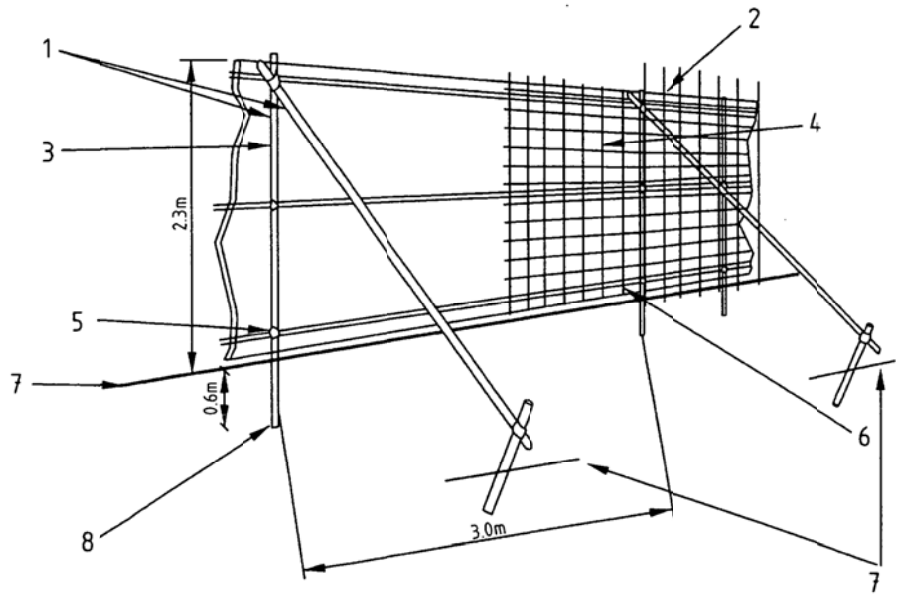
(TOWN & COUNTRY PLANNING ACT 1990)
THE TREES ENCLOSED BY THIS FENCE ARE PROTECTED BY PLANNING CONDITIONS AND/OR SUBJECTS OF A 'TREE PRESERVATION ORDER', THE CONTRAVENTION OF WHICH MAY LEAD TO CRIMINAL PROSECUTION

THE FOLLOWING MUST BE OBSERVED BY ALL PERSONNEL:

- **THE PROTECTIVE FENCING MUST NOT BE MOVED**
- **NO PERSON SHALL ENTER THE CONSTRUCTION EXCLUSION ZONE**
- **NO MACHINE, PLANT OR VEHICLES SHALL ENTER THE EXCLUSION ZONE**
- **NO MATERIALS SHALL BE STORED IN THE EXCLUSION ZONE**
- **NO SPOIL SHALL BE DEPOSITED IN THE EXCLUSION ZONE**
- **NO EXCAVATION SHALL OCCUR IN THE EXCLUSION ZONE**
- **NO FIRES SHALL BE LIT IN THE EXCLUSION ZONE**

ANY INCURSION INTO THE EXCLUSION ZONE MUST BE WITH THE WRITTEN PERMISSION OF THE LOCAL PLANNING AUTHORITY

Fig. 1: CEZ Warning Sign



1. Scaffold poles.
2. Uprights driven into ground at a maximum 3.0m spacing with cross members and brace as appropriate.
3. Wooden panels secured with wire ties or scaffold clamps where necessary.
4. Weldmesh "Heras" type clamped to uprights and horizontals.
5. Scaffold clamps.
6. Wire twisted and secured to inside face of fencing.
7. Ground level.
8. Scaffold poles driven approximately 0.6m into the ground.

Fig. 2: BS5837:2005 Temporary Protective Fencing – Recommended Construction

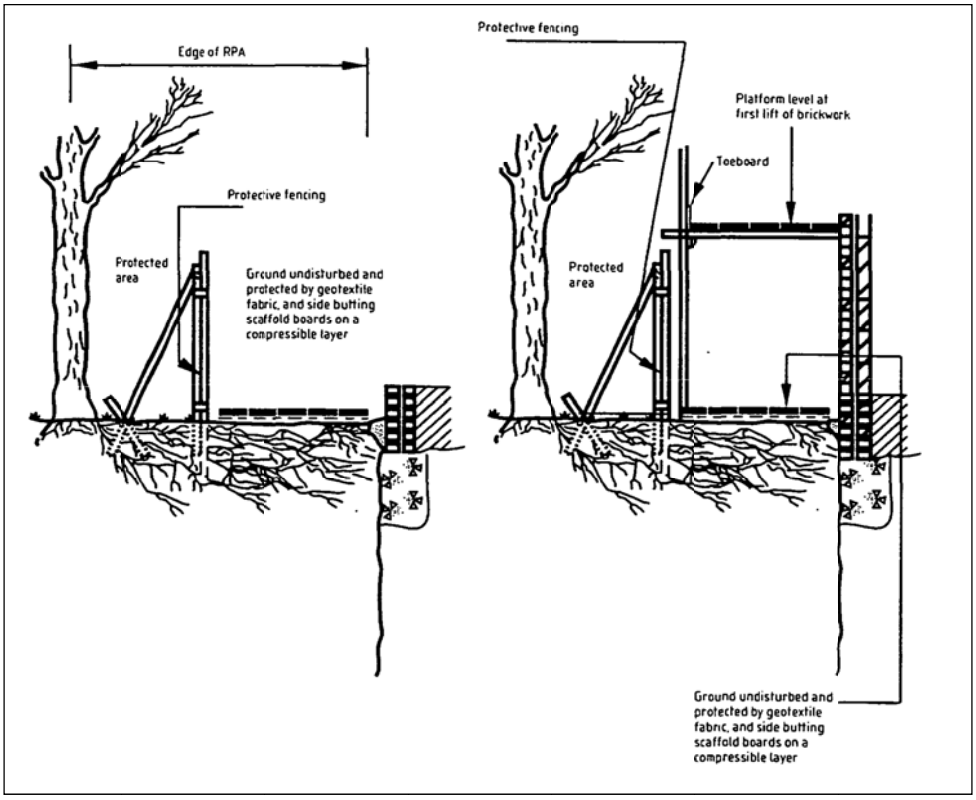
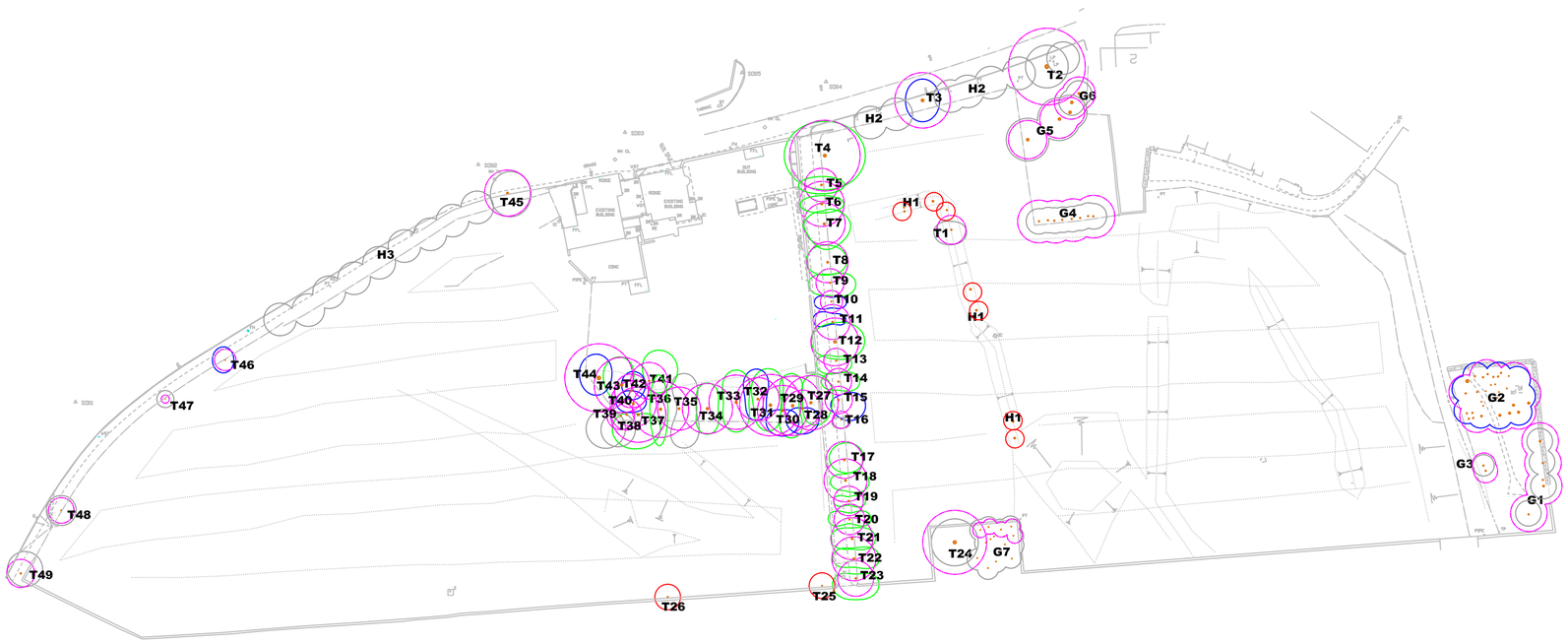


Fig. 3: BS5837:2005 Temporary Ground Protection – Recommended Construction



KEY

T = Surveyed Individual Tree
G = Surveyed Group of Trees
H = Surveyed Hedge

Please refer to associated Tree Survey Schedule for specific details in respect of items below:

Tree Categorisations:

Those of a High and Moderate Quality &/or Value:

Category 'A' Tree/Group/Hedge
High Quality/Value with Estimated Remaining Lifespan of Over 40 Years

Category 'B' Tree/Group/Hedge
Moderate Quality/Value with Estimated Remaining Lifespan of Between 20 & 40 Years

Those of a Low Quality &/or Value:

Category 'C' Tree/Group/Hedge
Low Quality/Value with Estimated Remaining Lifespan of Between 10 & 20 Years

Category 'R' Tree/Group/Hedge
<10 Years Remaining Lifespan - Should Therefore be Considered for Removal in Accordance with Prudent Arboricultural Management During that Period Regardless of Proposals

Root Protection Areas (RPAs):

Radial RPAs
(Area(s) that Should be Protected Throughout Development Works with Protective Fencing to form a Construction Exclusion Zone (CEZ))

Project:
CHAPEL HILL
LONGRIDGE
LANCASHIRE
PR3

Client:
UNITED UTILITIES PROPERTY SERVICES

Title:
TREE CONSTRAINTS PLAN

Scale:	1:1000@A2
Date:	December 2011
Drawn by:	PH
Checked by:	PH

Ref: BOW0054 / BTC240-TCP Rev:

Plot numbers to units refer to detail house type plans numbered 08/107 - HT-P01 to HT-P54

Proposed levels indicated are provisional only and subject to final site check prior to construction.

Existing levels and boundaries are based on Topographical Survey information prepared by Survey Operations Limited, and dated May 2008

St. Cecilia's RC High School

Recycling Centre

Ghost Islands and central refuge to CBO Transport Traffic details

Stone wall re-built to this line to improve visibility

Cheshire Railings to match existing (to detail)

New footpath formed to CBO Transport Traffic details

Chapel Hill

stone retaining walls

existing Cheshire Railings

Cheshire Railings

cheshire railings

For details of proposed Landscaping scheme refer to TEP Landscape Strategy Plan

pond

cheshire railings

easement

easement

existing stone walls

0m 10m 20m 30m 40m 50m 60m 70m 80m 90m 100m

1 : 500

Rev.	Date	By	Description

Client:

United Utilities

mck associates limited
architecture ■ building surveying ■ project management
bunsby ville ■ 48 watling street road ■ fulwood ■ preston ■ pr2 8bp
tel: 01772 774510 fax: 01772 774511 mck@mckassociates.co.uk

Project:

Proposed Residential Development
Chapel Hill, Longridge

Drawing Title:

Site Layout Plan as Proposed

Drawn:	Checked:	Scale: 1:500	Date: 6 December 2011
Job No: 08/107		Drawing No: 1010	Rev:

A1

PRELIMINARY