



1232 Whiteacre Lane
Barrow, Clitheroe
Tree Survey Report

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28 August 2014

Document Control		
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Project No: 1232	Project: Whiteacre Lane, Barrow	Date: August 2014

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01 Introduction

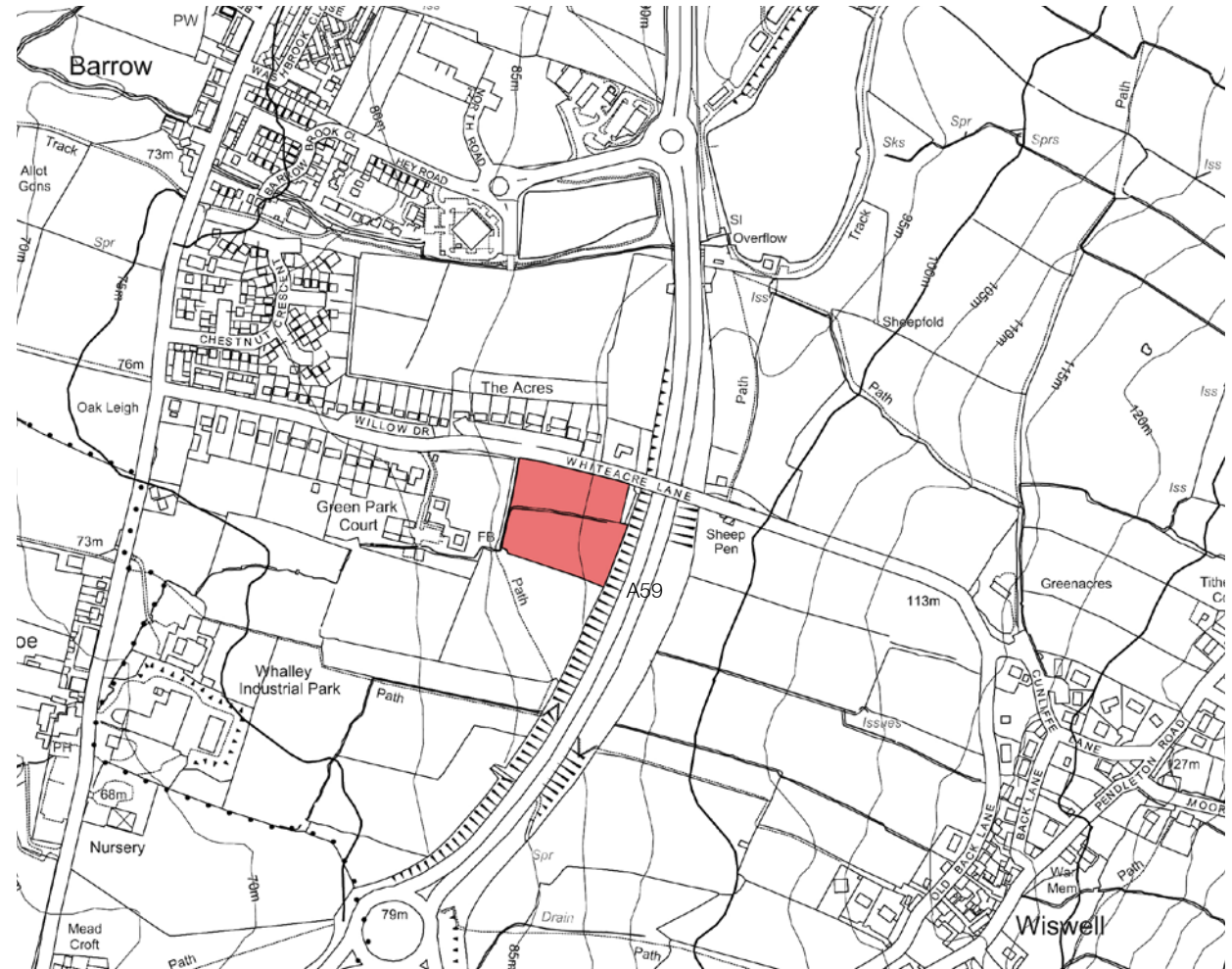
Introduction

This report has been produced by Cass Associates on behalf of Redrow Homes Lancashire. It represents the findings of a tree survey carried out at land on Whiteacre Lane, Barrow, Clitheroe.

The report accompanies an outline planning application for proposed residential development on the land with a detailed planning application for access. The findings of this report have informed these proposals.

The information and associated drawings found within section 03 of this document provide an assessment of the existing trees for arboricultural and tree management purposes only.

The information found within section 04 of this document addresses the tree retention and removal proposals.



02 Survey + methodology

Survey

Cass Associates carried out the site work for the tree survey on 18 August 2014. All trees were accessible to be surveyed at the time.

The weather was sunny with cloudy spells and light winds. As the survey was carried out in the summer, the trees were in full leaf.

The tree survey is based on a topographical survey of the site provided by Survey and Design Limited. Very young trees/saplings were not always surveyed.

Methodology

The tree survey was carried out in accordance with BS 5837:2012 Trees in relation to design, demolition and construction - Recommendations.

The following features were used to describe and assess the individual and groups of trees within the site:

Tree reference

A tree reference number preceded by 'G' denotes a Group of trees with a distinctive character.

A reference number preceded by 'T' denotes an individual Tree of particular note, or of distinctive character, within a tree group or separate to the tree groups.

A reference number preceded by 'H' denotes a hedgerow.

Species

The common name of the species(s) is provided along with the Latin name.

Height (metres)

Estimated height from base of bole to growing tip.

Stem diameter (millimetres)

Measured at 1.5 metres height above adjacent ground level. On sloping ground the height is taken on the upslope side of the tree base. When a tree is multi-stemmed this is stated and the diameter measured immediately above the root flare. A range of stem diameters is provided for groups of trees where possible.

Branch spread (metres)

The branch spread to north, east, south and west is recorded.

Canopy height (metres)

Height of canopy above adjacent ground level is provided.

Life stage

Maturity does not necessarily directly correlate with age as detrimental environmental conditions may induce more rapid aging. Therefore, two trees of the same number of years may be classed into different age class categories due to one tree growing in a sheltered location with good ground conditions while another is in a harsher environment. The tree in the latter environment is likely to age more rapidly.

Key age class categories:

- Y (Young) Generally trees which are recently established.
- EM (Early Mature) Trees that are well established, usually 20 years old, and which have general appearance, but not yet the dimensions, of mature trees.
- M (Mature) Trees that are of full dimension but not yet showing signs of age, eg. dead wood in the crown.
- OM (Over-mature) Trees that are in decline, with die-back and loss of branches etc.

02 Survey + methodology

Physiological condition and general observations

General observations about the physiological and structural condition of the tree as well as its immediate context.

Categories of physiological condition:

P: Poor

F: Fair

G: Good

Estimated remaining contribution

The estimated remaining contribution in years of a tree does not necessarily directly correlate with age class as detrimental environmental or physiological conditions of the tree may affect its remaining contribution. For example, two trees of the same age class may have different estimated remaining contributions due to one tree growing in near ideal conditions while another is in less favourable conditions. Also, what are favourable environmental conditions for one species are not necessarily favourable for another. For example, some species prefer damp growing conditions while others favour drier ground conditions. Categories of estimated remaining contribution:

- less than 10 years
- 10-20 years
- 20-40 years
- more than 40 years

Category

The tree categorization is based on BS 5837:2012: Cascade chart for tree quality assessment. (Figure 2).

The broad category grading is as follows:

- Category U Those in such a condition that they cannot realistically be retained as living trees in the context of the current land use for longer than 10 years.
- Category A Trees of high quality with an estimated remaining life expectancy of at least 40 years.
- Category B Trees of moderate quality with an estimated remaining life expectancy of at least 20 years.
- Category C Trees of low quality with an estimated remaining life expectancy of at least 10 years, or young trees with a stem diameter below 150mm.

Additionally, three subcategories (1, 2, and 3) are used to assess the arboricultural, landscape and cultural qualities respectively.

03 Findings



Photo 1: G1 from Whiteacre Lane.



Photo 2: G4 looking towards A59 from site



Photo 3: G5 along A59

Site overview

The site is roughly square in shape and consists of two fields. The site is defined by trees and hedgerows which are predominantly native.

The site is defined on three sides (north, south and west) by hedgerows. The eastern boundary abuts groups of trees on the embankment associated with the A59. The site is bisected in a roughly east/westerly direction by a hedgerow. Hawthorn is the dominant hedgerow species. The hedgerows are mature and show evidence of historic laying.

A number of notable trees are found within the hedgerows, in particular the central and western hedgerows as described below.

Trees

There are some large, mature, moderate quality (category B) trees set within the hedgerows:

- an Alder (T2) and Ash (T3) are located within H1;
- two Ash (G1) are located in H3;
- two Ash (T4 and T5) are located towards the southern end of H4.

In addition there are some low quality (category C) trees in the hedgerows:

- a semi-mature Ash (T1) located in H1;
- a group of early mature Hazel and Holly (G2) in H2;

- a group of young Ash (G3) in H2.

Adjacent to the eastern boundary of the site on the embankments of the A59, lies an area of low quality (category C) trees. These trees, particularly the taller ones (G4 and G5) visually screen the infrastructure associated with the A59 from the site. There are three distinct groups of trees within this area:

- a large area of young to semi-mature trees containing Field Male, Ash and Hawthorn (G5);
- a small but relatively tall group of Grey Poplar (G4);
- a group of young, widely spaced, deciduous trees dominated by Ash (G6).

03 Findings



Photo 4: G6 looking towards A59 from site



Photo 5: H5 on southern boundary

Hedgerows

A hedge bisects the site (H1). This hedgerow is predominantly Hawthorn with occasional Elder and Hazel. The hedgerow is approximately six metres high and gappy.

A hedgerow along Whiteacre Lane provides a boundary along the northern edge of the site (H2). This hedge is approximately five metres high and is predominantly Hawthorn with Hazel, Ash, Holly and Elder.

Hedgerows define the western edge of the site. The northern section of this boundary (H3) is gappy, about four metres high and contains Hawthorn, Elder and Hazel. The southern section of the western boundary (H4) is Hawthorn and approximately five metres high.

Along the southern edge of the site is a predominantly Hawthorn hedgerow with occasional Hazel and Elder (H5). This hedgerow is approximately six metres high and contains large gaps.

04 Trees in relation to the development proposal



Photo 6: Detail of H5 looking south from site



Photo 7: H4 looking into site from western boundary



Photo 8: H2 from Whiteacre Lane

Tree retention/removal

As the residential proposals for the site are developed, every opportunity will be made to accommodate the trees and hedgerows within areas of soft landscape. In particular, trees designated with the highest quality categories will be prioritised for retention. As far as practicable, development of hard surfaces such as roads, footpaths and buildings, will be kept outside the root protection areas.

The proposed access arrangements will result in the need to remove trees and hedgerow along the northern boundary in order to create sufficient visibility for the new access point and to accommodate a footpath. The trees/hedgerows affected by the proposed access are low quality, category C (H2, G2 and G3).

New planting

New trees will be integrated into the proposed residential development to augment the landscape quality of the site and to compensate for any loss of existing trees and hedgerows. The palette of trees species planted will include locally native trees.

A new hedge will be planted along Whiteacre Lane. It will be set back from the road beyond the sight lines for the new access. The new hedgerow will comprise of a mix of locally native species and contain native hedgerow trees.

Hedgerows which are retained and contain gaps will be augmented by the planting up of gaps using a mix of locally native species.

The details of the proposed tree and hedgerow planting will be agreed with the Local Authority as part of the planning process.

Appendices

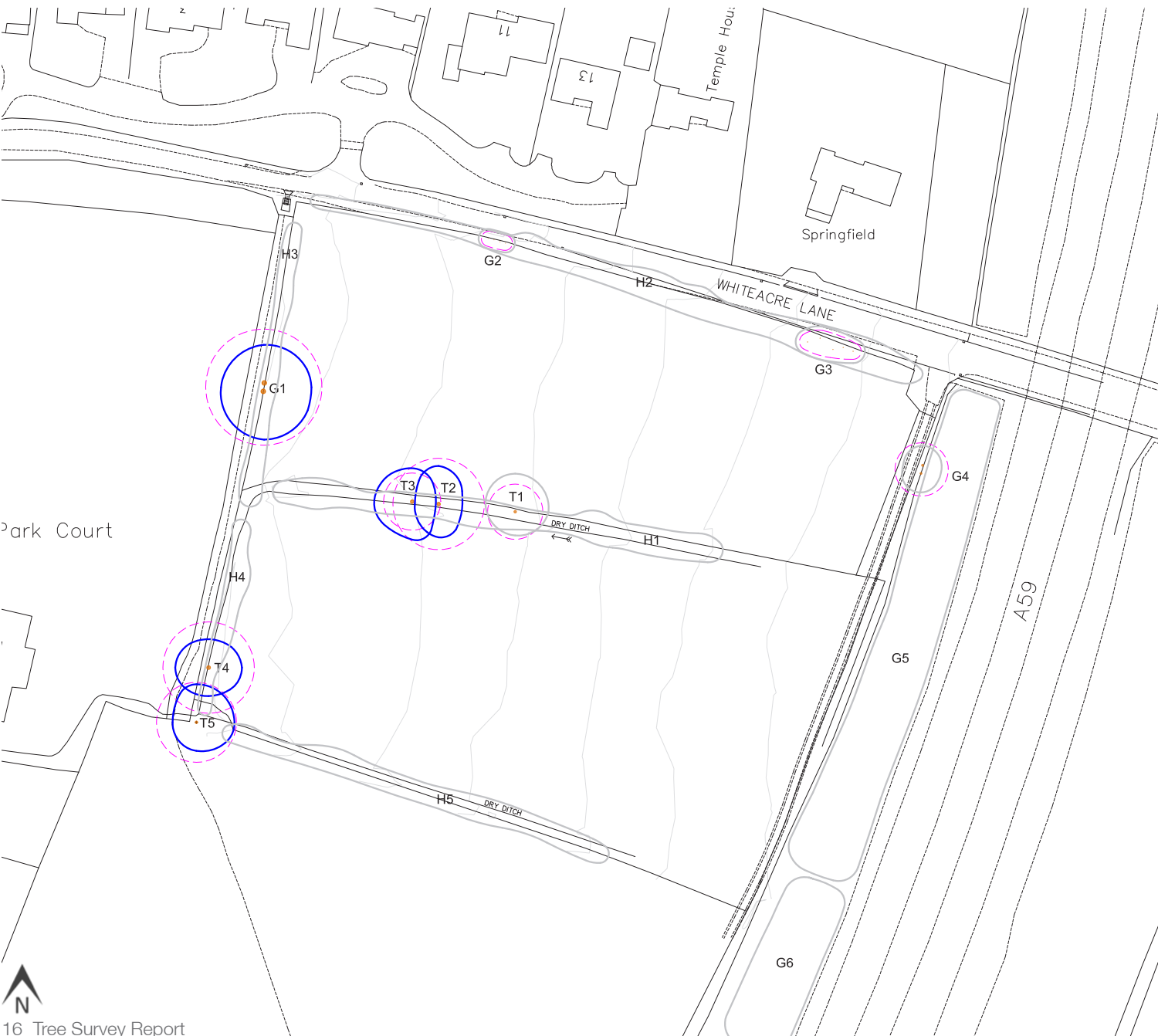
Tree survey data sheets

REF	SPECIES	HEIGHT (M)	STEM DIA. (MM)	BRANCH SPREAD (M)				CANOPY HEIGHT	PHYSIOLOGICAL CONDITION	LIFE STAGE	GENERAL OBSERVATIONS	PRELIMINARY MANAGEMENT RECOMMENDATIONS	ESTIMATED REMAINING CONTRIBUTION	CATEGORY
				N	E	S	W							
T1	<i>Fraxinus excelsior</i> Ash	10	480	8	7	5	6	4.5	P	SM	<ul style="list-style-type: none"> Partially occluded 1m long wound to lower stem Dieback throughout canopy Poor vigour 	<ul style="list-style-type: none"> Monitor conditions to assess need for removal 	10-20	C1/2
T2	<i>Alnus glutinosa</i> Common Alder	15.5	800	8	5	7	5	2	F	M	<ul style="list-style-type: none"> Crown showing signs of a minor reduction in vitality with slightly small leaves and slightly sparse foliage cover Wire of post and wire fence embedded within tree Dry ditch to south 		>40	B1/2
T3	<i>Fraxinus excelsior</i> Ash	16	500	7	5	8	8	2.5	G	M	<ul style="list-style-type: none"> Stem trifurcates into sub-stems at a height of approximately 0.5m with several partially included bark unions Number of cankers to branches Potential decay problem where hole divides into three Post and wire fence embedded within tree Dry ditch to south Branch lost at 2m high resulting in decay One sub stem ?? north and one west 		>40	B1/2
T4	<i>Fraxinus excelsior</i> Ash	21	800	6	7	6	7	3	G	M	<ul style="list-style-type: none"> Bole leaning to east Bole divided into three at approximately 2.5m height leading to potential decay problems Some deadwood in canopy 	<ul style="list-style-type: none"> Remove deadwood from canopy 	>40	B1/2
T5	<i>Fraxinus excelsior</i> Ash	19	700	8	8	6	5	1	G	M	<ul style="list-style-type: none"> Growing on edge of ditch along site boundary Bole forks at 2m height potentially leading to decay Some deadwood in canopy 	<ul style="list-style-type: none"> Remove deadwood from canopy 	>40	B1/2
G1	2no. <i>Fraxinus excelsior</i> Ash	21	1020	9	10	11	9	2	G	M	<ul style="list-style-type: none"> Located on the western boundary Very closely spaced group with interconnecting crowns Moderate amount of deadwood at approximately 6m height Limbs lost at approximately 6m high on southern tree leading to decay of bole 	<ul style="list-style-type: none"> Remove dead limbs 	>40	B1
G2	<i>Corylus avellana</i> , <i>Ilex aquifolium</i> Hazel, Holly	3-6	120	2	2	2	2	3	F/G	EM	<ul style="list-style-type: none"> Loose group of small multi-stemmed trees located in hedge along road 		>40	C1/2
G3	<i>Fraxinus excelsior</i> Ash	7	110	2.5	2.5	2.5	2.5	3	G	Y	<ul style="list-style-type: none"> Loose group of very young trees located in hedge along road frontage 		>40	C1/2
G4	2no. <i>Populus canescens</i> Grey Poplar	18.5	470	4	4	4	4	4	G	EM	<ul style="list-style-type: none"> Closely spaced group located on neighbouring verge to A59 to east Stem of tree to north divides into multiple sub-stems at a height of approximately 0.5m with included bark unions 		>40	C1

Tree survey data sheets

REF	SPECIES	HEIGHT (M)	STEM DIA. (MM)	BRANCH SPREAD (M)				CANOPY HEIGHT	PHYSIOLOGICAL CONDITION	LIFE STAGE	GENERAL OBSERVATIONS	PRELIMINARY MANAGEMENT RECOMMENDATIONS	ESTIMATED REMAINING CONTRIBUTION	CATEGORY
				N	E	S	W							
G5	<i>Acer campestre</i> , <i>Fraxinus excelsior</i> , <i>Crateagus monogyna</i> Field maple, Ash, Hawthorn	8	350	3	3	3	3	1	G	SM	- Closely spaced group located on neighbouring verge to A59 to east.		<40	C2
G6	Predominantly <i>Fraxinus excelsior</i> with occasional <i>Crateagus monogyna</i> Ash, Hawthorn	4	50	1	1	1	1	NA	G	Y	- Widely spaced young trees with good canopy structure - Young tree group set back 4m from site boundary		>40	C2
H1	Predominantly <i>Crateagus monogyna</i> with <i>Corylus avellana</i> , <i>Sambucus nigra</i> Hawthorn, Hazel, Elder	6	250	5				3	G	M	- Historic laying - Gaps - Post and wire fence on north side - Dry ditch on south of hedge - Section of old timber fence in hedgerow	- Gap up with mixed native species	>40	C2
H2	Predominantly <i>Crateagus monogyna</i> with <i>Corylus avellana</i> , <i>Sambucus nigra</i> , <i>Ilex aquifolium</i> , <i>Fraxinus excelsior</i> Hawthorn, Hazel, Elder, Holly, Ash	5	150	3				3	G	M	- Partially maintained hedgerows along road frontage to Whiteacre lane		>40	C2
H3	<i>Crateagus monogyna</i> , <i>Corylus avellana</i> , <i>Sambucus nigra</i> Hawthorn, Hazel, Elder	4	170	2				2	F	M	- Historic laying - Large gaps in hedge - Timber post and barbed wire on both sides of hedge	- Gap up with mixed native species	>40	C2
H4	<i>Crateagus monogyna</i> Hawthorn	5	200	2				0	F/G	M	- Historic laying - Large gaps in hedge - Post and wire fence on west side of hedge	- Gap up with mixed native species	>40	C2
H5	Predominantly <i>Crateagus monogyna</i> with occasional <i>Corylus avellana</i> , <i>Sambucus nigra</i> Hawthorn, Hazel, Elder	6	320	1				0	G	M	- Historic laying - Large gaps in hedge - Dry ditch on north of hedge	- Plant up gaps with native species	>40	C2

Tree survey plan



Tree Catagorisations

- Category 'A' Tree/Group/Hedge
High quality
- Category 'B' Tree/Group/Hedge
Moderate quality
- Category 'C' Tree/Group/Hedge
Low quality
- Category 'R' Tree/Group/Hedge
Should be considered for removal in accordance with prudent arboricultural management

Root Protection Areas (RPA's)

- Radial Root Protection Area
Area should be protected throughout development works with protective fencing to form a construction exclusion zone