ARBORICULTURAL IMPACT ASSESSMENT
to BS 5837:2012
at:
Land off Lidgett Lane
Pilley
Barnsley
South Yorkshire
S75 3AG

Client:
Barratt & David Wilson Homes
Yorkshire West

Client Address:
Raynham House
2 Capitol Close
Morley
LS27 0WH

Client Telephone:
0113 3076850

JCA Ref:
14254a/ChC

JCA Limited
Arboricultural & Ecological Consultants

Contents

1. Introduction

1.1 Purpose of the Report

1.1.1 This Arboricultural Impact Assessment is required in relation to the proposed development at **Land off Lidgett Lane, Pilley.**

1.1.2 The purpose of this report is to assess the impact of the proposals on the existing tree stock and outline mitigation actions, where appropriate, to minimise potential damage to retained trees.

1.2 Terms of Reference

1.2.1 JCA Ltd has been instructed by **Michaela Corbett**, of **Barratt David Wilson Yorkshire West** to prepare an Arboricultural Impact Assessment, based on our Arboricultural Report dated 26th July 2018 (JCA Ref: **14254/ChC**). The arboricultural survey and report conforms to the most recent specifications outlined in BS 5837: 2012 Trees in relation to design, demolition and construction - Recommendations.

1.2.2 I have been supplied with Development Layout Plan which details the proposed scheme. The tree data has been overlaid onto the proposed design to create the Arboricultural Implications Plan, which can be found at **Appendix 7.** This plan provides the basis for which this Arboricultural Impact Assessment has been prepared.

1.3 Scope of the Report

1.3.1 This report is compiled in accordance with *BS 5837:2012 'Trees in relation to design, demolition and construction – Recommendations'* and is based on an objective assessment of the existing vegetation.

1.3.2 The specific design of the proposed development has been considered within the Arboricultural Implication Assessment in **Section 3** and is detailed on the Arboricultural Implications Plan at **Appendix 7**.

1.4 Survey Details

1.4.1 The original survey took place during the month of July 2018 and was conducted by Charles Cocking *FdSc (Arboriculture*).

2. Tree Descriptions and Recommendations

2.1 Full details of all individual trees surveyed are recorded in the tables at **Appendix 1.** A full explanation of the tables can be found at **Appendix 2**. Please refer also to the Tree Constraints Plan at **Appendix 6** for tree locations.

3. Arboricultural Implications Assessment (AIA)

3.1 Proposed Development

3.1.1 The proposed development will consist of the construction of a residential housing scheme with associated garages, garden areas and access roads/driveways. Soft landscaping and new planting also forms part of the proposals, to create an attractive residential site post development.

3.1.2 All tree works required to accommodate the proposals are detailed in *italics* in the recommendation columns of the tables at **Appendix 1.** Please note that any works recommended during the initial survey and also listed in these tables in non italics.

3.2 Tree Removals for Development

3.2.1 **Four** groups of trees **(G2, G3, G4** and **G5)** and **one** hedge **(H9)** require removal to accommodate the proposed scheme.

3.2.2 Whilst the development will require the removal of trees within the site, it should be noted that new planting is proposed. This will act to mitigate tree losses, improve the visual benefits of the site and the surrounding area, and will improve the localised tree stock.

3.2.3 It is therefore important that a comprehensive Landscaping Scheme is produced for this site, detailing the location of proposed trees, hedges and shrubs accompanied by their planting specification and details of aftercare. It is recommended that a hedge is proposed to the west of the site to provide appropriate screening. Any proposed trees within the site should be in harmony with the locality, and suitable for a residential setting.

3.3 Pruning for Development

3.3.1 To accommodate the proposals, it will be necessary to heavily prune back **G8** in order to provide suitable access and working distances for pedestrians and vehicles and to afford reasonable clearances from proposed buildings. The pruning back to the boundary of **G8** will allow for the trees/vegetation within to be managed easily in the future. It is recommended that any pruning to **G8** is undertaken prior to any construction activity, and outside of the nesting bird season. Ideally, an Ecologist should be appointed to produce an appropriate pruning schedule and specification detailing the methods and timings of the work.

3.3.2 It is also recommended that **T6** is crown lifted to 6m on the development side only to provide suitable clearances. *Please note that **T6** requires pruning works regardless of development and this work should be undertaken prior to any construction activity.*

3.4 Implications for Retained Trees

3.4.1 The Protective Barrier

3.4.1.1 In order to ensure the effective protection of retained trees during development, a protective barrier will be installed, in accordance with BS5837: 2012 and may comprise of protective fencing and/or ground protection. This will be the first job on site following the tree removal and pruning works. The fencing should ideally be positioned to protect the entire **Root Protection Area** (**RPA**) of the retained trees, in order to create a **Construction Exclusion Zone** (**CEZ**).

3.4.1.2 Routes for pedestrian and site traffic will be located outside, and diverted away from, the RPAs of the retained trees wherever possible. Where this is not practicable, temporary protective surfaces (ground protection) must be laid over the exposed RPAs which will distribute the weight of site vehicles, machinery or pedestrians whilst allowing moisture to reach the tree rooting area beneath. Such surfaces should be constructed in accordance with BS5837: 2012.

3.4.1.3 Where work is required within the RPA of a tree which is to be retained, specialist measures must be adopted during the construction phase to avoid ground compaction and minimise root damage. Such areas are highlighted in blue on the Arboricultural Implications Plan at **Appendix 7**.

3.4.2 Access/Construction of Hard Surfacing

3.4.2.1 It is possible that the proposed hard surfaced access road will be located within the RPA of parts of **G8**. As the true extent of the RPA of this group is unknown and due to the minimal nature of the incursion (if any), it is not considered necessary to install specialised surfaces on this occasion. Instead, root pruning will be undertaken to minimise potential damage to tree roots and prevent 'ripping' damage, which is commonly associated with mechanical excavation. If root pruning is required, it is recommended that this is undertaken by the appointed Arboriculturalist.

3.4.3 Demolition

3.4.3.1 No demolition activities are required for this development and as such, no mitigation measures are considered necessary.

3.4.4 Construction/ Foundation Design.

3.4.4.1 Prior to construction, all protective measures required need to be correctly installed to prevent unnecessary damage during development.

3.4.4.2 The majority of the footprints of the proposed structures do not incur the RPA of retained trees. As such no specialist construction or foundation methods will be required for these plots.

3.4.4.3 However, the footprint of the building of **Plot 77** incurs the RPA of **T6**. As this is a mature specimen of value, root pruning is not recommended and should be avoided. As such, a specialist foundation design must be implemented to reduce excavation and the detrimental impact this can have on tree roots. Details of this should be included within an Arboricultural Method Statement, and a suitably qualified structural engineer should be consulted to choose an appropriate design.

3.4.4.4 This method will minimise foreseeable damage and will allow the retention of this tree whilst accommodating the proposed development and avoiding root pruning.

3.4.4.5 Advice should always be sought from a suitably qualified Structural Engineer. In some cases, the water demand of trees can be an important consideration when determining the appropriate foundation design. Because of this, water demands for the trees identified on this site are included at **Appendix 1**, in accordance with **NHBC chapter 4.2**, for use by the appointed structural expert.

3.4.5 Utilities

3.4.5.1 Details on service routes have not been provided to JCA Ltd at this time. If these are available, we request that these are sent to us to include within this impact assessment, to assess whether specialist methods may be required.

3.4.5.2 Where utilities need to be brought onto the site, these should be routed away from the RPAs of retained trees. Where this is not possible, methodologies on the installation of underground services without damage to tree roots should be considered.

3.4.5.3 All service providers should be consulted prior to commencement of works with the aim of minimising the number of service runs on the site. Any foreseeable incursions to RPAs should be communicated to the appointed arboricultural consultant and the LPA at the earliest possible time to prevent breach of planning conditions and damage to retained trees.

3.4.6 Site Compound

3.4.6.1 The site compound, which typically includes the site office, mess facilities, toilets, storage of materials and parking, must be located away from all of the trees and outside their RPAs. Care should also be taken to prevent soil contamination from chemical spillages, including petrol, diesel and oils.

3.4.7 Landscaping

3.4.7.1 Any proposed fence lines may be constructed within the RPA if necessary, providing that appropriate considerations are made to the protection of the tree. This is providing that no continual trenching is undertaken (e.g. for small walls onto which panel fencing is installed). Excavations must be kept to a minimum and therefore only fence designs requiring intermittent posts will be acceptable within the RPA of retained trees.

3.4.7.2 Any landscaping works close to the RPA's of retained trees should be addressed to the consultant prior to being carried out. Supervision may be required if the extent of the works may be of detriment to retained trees. Landscaping methods and materials should always be sympathetic to trees and their needs, to avoid damage to their stems, canopies or roots.

3.5 Arboricultural Method Statement

3.5.1 In order to protect the retained trees during the construction phase, protective fencing needs to be installed. Protective fencing specifications and on site positioning, along with details of any necessary specialist construction methods can be provided in an Arboricultural Method Statement (AMS) which will detail the methods and materials to be used for the development, as well as the protection specifications.

3.5.2 This document will be accompanied by a Tree Protection Plan, detailing the location of any fencing/ground protection measures.

4. Conclusions

4.1 The original survey took place during the month of July 2018 by Charles Cocking *(FdSc Arboriculture).* The trees surveyed are not protected by a Tree Preservation Order (TPO) and the site is not located within a Conservation Area.

4.2 Some tree works were recommended during the original survey, irrespective of the development. This is to manage potential risks, prevent the development of defects or for general maintenance purposes. These are detailed at **Appendix 1** in non-italics.

4.3 The arboricultural implications of the development have been considered and are discussed in **Section 3**.

4.4 Some trees require removal or pruning works in order to facilitate the proposed development. These works are included at **Appendix 1** in *italics*. These are also discussed in **Section 3.2** and their locations are shown on the Arboricultural Implications Plan at **Appendix 7.**

4.5 All development work carried out in close proximity to trees should be done so in a manner sympathetic to their needs. Otherwise the condition of the trees may deteriorate in the months and years following the development, leading to a loss of amenity and potentially hazardous trees.

4.6 The protection of retained trees can be achieved by the creation of a Construction Exclusion Zone based on the Root Protection Area of a tree. The Root Protection Area of each tree or group is marked on the Tree Constraints Plan at **Appendix 6**.

4.7 The proposed development should be accompanied by an Arboricultural Method Statement (AMS) and Tree Protection Plan detailing the specific protection measures necessary for each tree. This should specify the required fencing standard and positions (the creation of the Construction Exclusion Zone), acceptable construction techniques and necessary tree works.

4.8 Upon instruction JCA are able to produce the Arboricultural Method Statement in order to ensure the continued health of trees throughout the proposed development. We are also able to provide tree planting schemes and organise tree works.

4.9 The data gained during the original survey provides an indication of the health of the trees. However, it does not enable a comprehensive assessment of their condition over time. Trees are living organisms which are affected by many factors including weather conditions, diseases/disorders, light levels and human activities. Due to this, the report is only valid for a period of 1 year from the date of issuing. Should an update or revision of this report be required outside of this time period, JCA may require a further site visit to ensure that the condition of the trees has not significantly changed. It is advised that the trees are inspected regularly, in the interests of risk management.

Appendices

Tree Ref.	Age Common Name *Botanical Name*	Height (m)	Crown Height (m)	Height (m) and Direction of the Lowest Branch	Diameter (cm)	Crown Spread N W E S	Observations	Recommendations Priority	Physiological Condition	Structural Condition	Amenity Value	NHBC Water Demand	Life Expectancy (yrs)	Retention Category
T 1	Early-mature Horse Chestnut *Aesculus hippocastanum*	10	3	2 W	63	5 6 7.5 6.5	Single-stemmed with a slight lean and a reasonably balanced crown. A large stem cavity is present with decay. Tip dieback and leaf miner noted. Not the most arboriculturally valuable specimen but it is apparent that this tree has sentimental value.	Monitor on an annual basis. Low	FAIR	FAIR	MOD	MOD	10+	C 2
G 2	Early-mature Sycamore *Acer pseudoplatanus*	18	0+	n/a n/a	45, 30, 25, 30	6 3 7 5	Two trees growing close together and forming one canopy which is low hanging and touching the ground, and the adjacent church building. Included bark noted at stem junctions. Limited inspection.	No action required at present. *Remove to facilitate the proposed development.* n/a	FAIR	GOOD	MOD	MOD	20+	B 2
G 3	Semi-mature to early-mature Poplar & Ash *Populus sp. & Fraxinus excelsior*	16	0+	n/a n/a	Avg. 30	See Plan	Group located near the boundary, offering some screening value from the adjacent road. Low hanging canopies. Limited inspection. Individual trees not shown on topographical survey.	No action required at present. *Remove to facilitate the proposed development. Replace with a boundary hedge for screening.* n/a	GOOD	GOOD	MOD	MOD to HIGH	20+	B 2
G 4	Semi-mature to early-mature Sycamore & Ash *Acer pseudoplatanus & Fraxinus excelsior*	To 16	0+	n/a n/a	Avg. 30	See Plan	Group located near the boundary, offering some screening value from the adjacent road. Low hanging canopies. Limited inspection. Individual trees not shown on topographical survey.	No action required at present. *Remove to facilitate the proposed development. Replace with a boundary hedge for screening.* n/a	GOOD	GOOD	MOD	MOD	20+	B 2
G 5	Semi-mature Ash *Fraxinus excelsior*	14	0+	n/a n/a	Avg. 20	See Plan	A smaller group located near the boundary. Some screening value. Low hanging canopies. Individual trees not shown on topographical survey.	No action required at present. *Remove to facilitate the proposed development. Replace with a boundary hedge for screening.* n/a	GOOD	GOOD	MOD	MOD	20+	B 2

Tree Ref.	Age Common Name *Botanical Name*	Height (m)	Crown Height (m)	Height (m) and Direction of the Lowest Branch	Diameter (cm)	Crown Spread N W E S	Observations	Recommendations Priority	Physiological Condition	Structural Condition	Amenity Value	NHBC Water Demand	Life Expectancy (yrs)	Retention Category
T 6	Over-mature Ash *Fraxinus excelsior*	22	4	3.5 E	#110	13 13 13 13	A huge specimen situated on adjacent land but growing within **H7** and overhanging the site. The canopy is wide spreading with heavy lateral limbs. A cavity was noted at 3m which appeared to be occluding. Moderate snapped branches and deadwood noted; likely to drop branches in the future due to the heavy limbs and characteristics of the species. Limited inspection due to restricted access.	Inform the land owner of their duty of care; ideally the crown should be reduced by 3-4m in accordance with BS3998 to reduce the weight of the lateral limbs and therefore reduce the chance of limb failure. Crown clean by removing any snapped branches and deadwood. Whilst undertaking this work, the crown should be aerially inspected for signs of disease or cavities. Monitor on an annual basis thereafter. *Crown lift the canopy on the development side to 6m.* High	FAIR	GOOD	HIGH	MOD	20+	1 A 2
H 7	Semi-mature Mixed	3	0+	n/a n/a	Avg. 7.5	See Plan	Species include Hawthorn, Ash and Elder. A maintained boundary hedge. Some screening value for the adjacent properties. Good ecological value.	No action required at present. n/a	FAIR	GOOD	LOW	LOW to HIGH	20+	B 2
G 8	Semi-mature to early-mature Mixed	To 15	0+	n/a n/a	Avg. 20	See Plan	Species include Ash, Goat Willow, Elder, Silver Birch, Hawthorn, Sycamore and Cypress. A large group not surveyed in detail for the purpose of this report. An important group with excellent Ecological value and screening. Individual trees not shown on topographical survey.	No action required at present. *Heavily prune back away from the proposed properties and bring back into management. This work needs to be completed before any construction works commence, and outside of the nesting bird season, to the specification of an appropriate Ecologist.* n/a	GOOD	GOOD	HIGH	LOW to HIGH	40+	A 2
H 9	Semi-mature Mixed	4	0+	n/a n/a	Avg. 7.5	See Plan	Species include Ash, Elder and Hawthorn. A boundary hedge offering some ecological and screening value.	No action required at present. *Remove to facilitate the proposed development. Replacement hedge to be implemented into the scheme to mitigate the loss.* n/a	GOOD	GOOD	MOD	LOW to HIGH	20+	B 2

Appendix 2: Explanation of Tree Descriptions

A2.1 Measurements/ Reference Information

A2.1.1 *REF NUMBER.* All items surveyed are allocated a reference number preceded with a letter, identifying the type of vegetation surveyed: T = an individual tree, G = a group of trees or an area of vegetation, W = woodland, H = a hedgerow.

A2.1.2 *SPECIES: COMMON AND BOTANICAL NAME*. The common and botanical names of the species present are noted. If the species is not clear or identifiable, then a general common name and genus will be noted.

A2.1.3 *AGE CLASS* of the tree is described as young, semi-mature, early-mature, mature, over-mature, veteran or dead.

A2.1.4 *HEIGHT* of the tree is measured in metres from the stem base to the top of the crown.

A2.1.5 *CROWN HEIGHT* is an indication of the height above ground level at which the crown begins.

A2.1.6 *STEM DIAMETER* is measured at 1.5 metres above (higher) ground level. Where the tree is multi-stemmed at this point; diameter measurements are taken for each stem. If more than five stems are present, an average stem diameter is taken. If for whatever reason it is not practical to measure multiple-stemmed trees in this way, the diameter is measured close to ground level, just above the root buttress.

A2.1.7 *CROWN SPREAD* is measured from the centre of the stem base to the tips of the branches to all four cardinal points.

A2.1.8 *HEIGHT AND DIRECTION OF LOWEST BRANCH.* The height and direction of the lowest significant branch is noted because of potential issues relating to clearances and the need for tree pruning.

A2.1.9 *NHBC WATER DEMAND.* The water demand of each tree, as listed in NHBC Standards 2010 Chapter 4.2 'Building near trees'. This is included to aid structural engineers, architects and other members of the design team as it determines foundation depth and other considerations with regard to trees.

A2.2 Evaluations

A2.2.1 *PHYSIOLOGICAL CONDITION* is classed as good, fair, poor, or dead. This is an indication of the health and vitality of the tree and takes into account vigour, presence of disease and dieback.

A2.2.2 *STRUCTURAL CONDITION* is classed as good, fair or poor. This is an indication of the structural integrity of the tree and takes into account significant wounds, decay and quality of branch junctions.

A2.2.3 *LIFE EXPECTANCY* is classed as; 0, less than 10 years, 10+ years, 20+ years, or 40 + years. This is an indication of the minimum number of years before removal of the tree is likely to be required.

A2.2.4 *AMENITY VALUE.* A general indication is given in respect to the amenity/landscape value of the tree/group within the surrounding area.

A2.2.5 *PRIORITIES.* A priority rating is given concerning the time periods in which the recommended works should be undertaken. LOW priority works should be undertaken within 12 months of the survey, MOD (moderate) priority works should be undertaken within 6 months and HIGH priority works should be completed as soon as practically possible. If no works are recommended, N/A (not applicable) will be used.

A2.3 Retention Categories

A2.3.1 ***A (marked green on the plan) = Trees of high quality.***

These trees are of high quality and value with a good life expectancy (usually with an estimated remaining life expectancy of 40 years).

A2.3.2 ***B (marked in blue on the plan) = Trees of moderate quality.***

These trees are of moderate quality and value with a reasonable life expectancy (usually with an estimated life expectancy of at least 20 years).

A2.3.3 ***C (marked in grey on the plan) = Trees of low quality.***

These trees are of low quality and value but which are in adequate condition to remain or are young trees with a stem diameter below 15cm (usually with an estimated life expectancy of at least 10 years).

A2.3.4 Trees categorised as retention category ‘A’, ‘B’ or ‘C’ are then justified by being further divided into 3 subcategories:

1 = Mainly arboricultural qualities.

2 = Mainly landscape qualities.

3 = Mainly cultural values, including conservation value.

A2.3.5 ***U (marked in red on the plan) = Trees usually unsuitable for retention due to poor condition.***

These trees are in such a condition that they cannot be realistically retained as living trees in the context of the current land use for longer than 10 years. This may be due to any of the following:

1) Failure is likely due to serious, irredeemable, structural defects.
2) Removal of other category U trees will render them exposed and unstable.
3) They are in serious, overall decline or are dead.
4) They are of low quality and suppressing adjacent trees of better quality.
5) Diseases are present which may affect the health of adjacent trees.

These trees should be removed or treated in such a way as to make them safe where they have high ecological value, such as in a woodland setting.

Appendix 3: General Guidelines

A3.1 All tree work should be undertaken to BS 3998: 2010 '*Recommendations for tree work'* or other recognised industry practice.

A3.2 Staff carrying out the work must be qualified, experienced and ideally be Arboricultural Association approved contractors. They should be covered by adequate public liability insurance.

A3.3 This report is based upon a visual inspection. The consultant shall not be responsible for events which happen after this time due to factors which were not apparent at the time, and the acceptance of this report constitutes an agreement with the guidelines and the terms listed therein.

A3.4 Any defects seen by a contractor or the employer that were not apparent to the consultant must be brought to the consultant's attention immediately.

A3.5 No liability can be accepted by JCA in respect of the trees unless the recommendations of this report are carried out under the supervision of JCA and within JCA's timescale.

A3.6 It is advisable to have trees inspected by an arboricultural consultant on a regular basis.

Appendix 4: Glossary of Terms & Abbreviations

Arboriculture	The cultivation of trees in order to produce individual specimens of the greatest ornament, for shelter or any primary purpose other than the production of timber or fruit.
Canker	Disease damaged area of a tree, usually caused by fungus or bacteria affecting the bark.
Crown lift	The removal of the lowest branches, usually to a given height. It allows more residual light and greater clearance underneath for vehicles etc.
Crown reduction	The reduction of a tree's height and spread while preserving its natural shape.
Crown thin	The removal of some of the density of a tree's crown**,** usually 5-15% allowing more light through its canopy and reducing wind resistance.
Deadwood	Either dead branches, or a procedure involving the removal of dead, dying and diseased branches.
Dieback	Where branches are beginning to show signs of death usually at the tips in the crown.
Epicormic shoots	Small branches that grow in clusters around the base of the stem of a tree or within the crown. This is usually as a result of bad pruning or some other stress factor, although can be a natural growth pattern for some species of tree (eg Lime species).
Included bark	Where the bark on two adjoining branches or stems is growing tight together, forming a joint with limited physical strength.
Pollarding	A method of tree management in which the main trunk and principle branches of the tree are cut to the same height, and the resulting branches are then cropped on a regular basis.
Remedial pruning	The removal of old stubs, deadwood, epicormic growth, rubbing or crossing branches and other unwanted items from the tree's crown. Sometimes referred to as crown cleaning.
RPA	Root Protection Area – Theoretical rooting area of a tree as defined in BS5837:2012 *Trees in relation to construction*.
Topping	Topping is a form of pruning that removes terminal growth leaving a 'stub' cut end. Topping can cause serious health problems to a tree.

Appendix 5: Author Qualifications

Principal Consultant and Managing Director

Jonathan Cocking *F.R.E.S., Tech. Cert. (Arbor.A), PDipArb (RFS) FArborA CBiol MSB. MICFor.* Jonathan is a Registered Consultant and Fellow of the Arboricultural Association and sits on its Professional Committee. He has 31 years experience in the Arboricultural profession and served for eight years as Senior Arboriculturist with a large local authority before establishing JCA in 1997. Jonathan has since developed JCA's portfolio of services and its extensive client base. He is a Chartered Biologist, a Chartered Arboriculturalist and an Expert Witness with much experience of litigation work.

Technical Director

Toby Thwaites *BSc (Hons), HND (Arboriculture).* Toby joined JCA in 1998 after graduating in Ecology at the University of Huddersfield and has since graduated in Arboriculture at the University of Central Lancashire. A former JCA team leader and Consulting Arboriculturist, Toby is now Technical Director and oversees all office and on-site activities at JCA and is on hand to offer technical support and advice.

Consulting Staff: Arboriculture

Toby Parsons *Cert. Arb. (RFS), Tech. Cert. (Arbor.A).* Toby joined JCA after spending 6 years working as a senior climber for various Arboricultural contractors in the East Midlands and the South-West. He has gained the Level 2 Certificate in Arboriculture (RFS) and an Arboricultural Technicians Certificate. Toby is LANTRA certified in Professional Tree Inspection.

Scott Reid ***ND*** *(Arboriculture and Forestry).* Scott joined JCA after working with other consultancy companies in the south of England. He specialises in trees in relation to development and holds a National Diploma, various NPTC qualifications and is currently studying for his Level 4 Diploma in Arboriculture.

Andrew Bussey. Andrew joined JCA having spent 12 years working as a tree surgeon for various private companies and a Local Authority. He has various NPTC qualifications, is QTRA qualified and is currently studying for his Arboricultural Technicians Certificate.

Phil Humeniuk *FdSc (Arboriculture).* Phil joined JCA having spent 3 years working for various tree surgery companies and as a Tree Officer for a Local Authority. He also has several years experience working as a consultant both for JCA and for another consultancy. Phil obtained his foundation degree in Arboriculture at the University of Central Lancashire and has various NPTC's and is LANTRA certified in Professional Tree Inspection.

Emily Wilde *FdSc (Arboriculture).* Emily joined JCA having previously worked for various private tree surgery and consultancy companies over the past 8 years. She initially obtained a ND in Forestry & Arboriculture, followed by a FdSc in Arboriculture at Askham Bryan College, York. Emily has various NPTC certificates and is QTRA qualified.

Mick Eltringham *ND (Forestry).* Mick joined JCA after spending 12 years working in the industry for various private companies in the north and south of England. He has also spent the last five years working as a consultant for two canopy research projects in the Amazon Rainforest, working with Oxford University and the University of Arizona. He has various NPTC Qualifications.

Charles Cocking *(FdSc Arboriculture).* Charles joined JCA in January 2014 as an Apprentice having previously worked for the company on a part time basis during 2013. Charles obtained his Foundation Degree in Arboriculture at Askham Bryan College, York, and is now part of our qualified Arboricultural consultancy team.

Consulting Staff: Ecology

David Bodenham *BSc Ind (Hons) Zoology, MSc Biodiversity and Conservation.* David joined JCA as an addition to the expanding ecology department. An advocate of evidence based conservation, he studied Zoology (Ind) at University and moved onto an MSc in Biodiversity and Conservation where he gained the myriad of skills needed as an ecologist. With over 7 years of experience, David specialises in bat and amphibian ecology.

Jenny Butler *Bsc (Hons) Environmental Science.* Jenny joined JCA's ecology department in 2017, bringing with her a bachelor degree in Environmental Science from Bangor University. Jenny has previously worked as an Environmental Consultant for an Agri-Environment company and as a freelance ecological consultant. Jenny specialises in great crested newt and bat ecology.

Amanda Beck *Cert He in Field Ecology.* Amanda joined JCA's ecology department in 2018, previously working as a freelance Ecological Consultant in North Wales and Liverpool and as a trainee Ecologist in South Wales. Amanda has extensive practical experience in surveying for botanical, amphibians, terrestrial and marine mammals along with invertebrate research work. She has practical experience in habitat management and creation and is a CIEEM student member.

Administrative Staff

Sue Guest Administrative Team Leader.
Catherine Cocking Accounts Manager.
Lisa Hampson Marketing Manager.
Simeon Haigh *BSc (Hons).* IT Director.
Lorraine Spink Administrative Assistant.

N

W E

S

T1

T6

H9

H9

H7

G2

G3

G4

G5

G8

G8

G8

TREES

TREES

TREES

TREES

Private Housing

Portable Line of Boundary Fence - Unable to Survey

0 1 5 10 15 20 30 40 50 metres

Root Protection Area: RPA

THE ROOT PROTECTION AREA (RPA) INDICATES THE LIKELY ROOTING ZONE OF A TREE.

THIS AREA SHOULD IDEALLY REMAIN UNDISTURBED IF THE TREE IS TO BE RETAINED.

THE DEVELOPMENT PROPOSALS SHOULD THEREFORE BE DESIGNED TO AVOID THE RPA OF ANY TREE WHICH IS TO BE RETAINED.

IF IT IS NECESSARY FOR THE DEVELOPMENT TO ENCROACH INTO THE RPA OF A TREE WHICH IS TO BE RETAINED THEN SPECIALIST CONSTRUCTION TECHNIQUES AND MATERIALS MUST BE CONSIDERED.

Appendix 6: Tree Constraints Plan

ADDRESS: Land off Lidgett Lane, Pilley, Barnsley, South Yorkshire, S75 3AG.
JCA REF: 14254/ChC

SCALE : 1:500	PAPER SIZE : A1

SURVEYED BY: CC	DRAWN BY: CC	APPROVED BY: ME

BRITISH STANDARD 5837:2012: 4.5 RETENTION CATEGORIES

Detailed definitions of these catagories are at Appendix 2 of our report. N.B. These categories do not necessarily represent or correspond to recommendations for action made in this report.

	CATEGORY A: 'RETENTION MOST DESIRABLE'
	CATEGORY B: 'RETENTION DESIRABLE'
	CATEGORY C: 'TREE WHICH COULD BE RETAINED'
	CATEGORY U: 'TREE FOR REMOVAL'
•	STEM OF TREE TO BE RETAINED
•	STEM OF TREE TO BE REMOVED
	ROOT PROTECTION AREA
	ROOT PROTECTION AREA (PRIOR TO OFF-SETTING)

JCA Limited

Arboricultural & Forestry Consultants

N
W E
S

LIDGETT LANE

PILLEY GREEN

PILLEY GREEN

106
42
96
53
94
84
40
59

Pilley Mission Church

T1
T6
G2
G3
G4
G5
G8
H7
H9

PROPOSED PARKING BAYS TO REPLACE EXISTING FOOTWAY

6m
2.4m
1.2m

0 1 5 10 15 20 30 40 50 metres

Appendix 7: Arboricultural Implications Plan

ADDRESS: Land off Lidgett Lane, Pilley, Barnsley, South Yorkshire, S75 3AG.
JCA REF: 14254a/ChC

SCALE : 1:500	PAPER SIZE : A1

	TREE TO BE RETAINED
	TREE TO BE REMOVED
•	STEM OF TREE TO BE RETAINED
•	STEM OF TREE TO BE REMOVED
	ROOT PROTECTION AREA
	ROOT PROTECTION AREA ENCROACHED BY THE PROPOSED DEVELOPMENT; SPECIALIST CONSTRUCTION TECHNIQUES AND MATERIAL TO BE USED AND DETAILED WITHIN A METHOD STATEMENT.

JCA Limited

Arboricultural & Forestry Consultants

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

Signed

.....

Charles Cocking *FdSc (Arboriculture).*

10th August 2018

For and on behalf of ***JCA Ltd***

Registered Office:

Unit 80
Bowers Mill
Branch Road
Barkisland
Halifax
HX4 0AD

Tel. 01422 376335
Fax. 01422 376232
Email: jon@jcaac.com

www.jcaac.com

Report printed on recycled paper

JCA Ltd. Arboricultural and Ecological Consultants
Professional Tree and Ecology Advice nationwide

ARBORICULTURAL SERVICES

Guidance for Architects and Developers

- British Standard 5837 Tree Surveys
- Arboricultural Implication Assessments (AIA)
- Arboricultural Method Statements (AMS)

Advice for Engineers, Loss Adjusters and Insurers

- Tree Surveys for Subsidence
- Heave Assessment
- Tree Root Identification

Advice for Local Authorities and Social Housing

- Tree Safety Surveys
- Specialist Decay Detection
- Landscape and Orchard Design

Tree Advice for the Legal Profession

- Subsidence Litigation
- Personal Injury and Accident Investigation
- Expert Witness, Planning Inquiries and Appeals

Veteran Tree Management

- Ancient Woodland Management
- Veteran Tree Management

Tree Health and Pest and Disease Management

- Pest and Disease Surveys
- Tree Health Checks
- Disease Mitigation and Control

ECOLOGICAL SERVICES

Ecological Pre-Planning Services

- Phase 1 Habitat Surveys
- Great Crested Newt eDNA Sampling
- Protected Species: Bat, Wintering and Nesting Bird, Badger, Amphibian, Otter, Water Vole, White-Clawed Crayfish, Dormice and Reptile Surveys.
- Preparation for Environmental Impact Assessment (EIA)
- Invasive Species Surveys
- Code for Sustainable Homes

Ecological Post-Planning Services

- Biodiversity Enhancement Plans
- Protected Species Mitigation
- Ecological Management (Bat and Bird box installation and inspection)

HEAD QUARTERS:

Unit 80 Bowers Mill,
Branch Road,
Barkisland,
Halifax, HX4 0AD.

Tel: 01422 376335
Mobile: 07778 391986
Email: jon@jcaac.com
Website: www.jcaac.com

Company Reg No. 05005041
VAT No. 686 4674 78