Phase 2 Pre-development Arboricultural Report

at

553 Doncaster Road,

Ardsley

for

L Wilcock and M Farrell

19 April 2018

By

Ian Kennedy

Wharncliffe Trees and Woodland Consultancy

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Summary

I have been instructed by Mr L Wilcock and Mr M Farrell, the applicants, to carry out a pre-development tree survey of the significant trees on land at 553 Doncaster Road, Ardsley, Barnsley.

This report has been prepared for both plot 1, owned by Mr Wilcock and plot 2, owned by Mr Farrell.

The location and spread of seven individual trees are recorded on Plan 1 that shows the existing layout. Table 1 records their species, dimensions, age, life expectancy, categorisation and root protection areas. This information was collected, interpreted and recorded in accordance with BS5837:2012 *Trees in relation to design, demolition and construction – Recommendations*.

Plan 1 also shows the root protection areas (RPA) that would be required for each tree to protect them if they were to be retained as part of development.

The trees are confined to the eastern boundary of the site; the largest and oldest are growing close to the southeast corner and have been included in retention category B. The trees growing towards the northeast corner are smaller and younger, and have been included in the lowest retention category (C).

The dwelling at plot 1 would encroach marginally into the crown spread and RPA of Trees 1 and 2 and would have no detrimental impact on them. Trees 3 and 4 would be unaffected.

The dwelling at plot 2 would encroach very marginally into the RPA of Tree 5 and would not be detrimental to the tree.

The garage of plot 2 would encroach significantly into the RPAs of Trees 6 and 7. There are two options here; removed the trees to facilitate the layout, or design a raft foundation that avoids any excavation of the existing levels within the RPAs.

Contents

1.0 Introduction

1.1 Instruction

I have been instructed by Mr L Wilcock and Mr M Farrell, the applicants, to carry out a pre-development tree survey of the trees growing on land at 553 Doncaster Road, Ardsley.

The tree survey is intended to provide a structured, impartial assessment of the tree population within the proposed development area.

The survey is intended to be informative to all stages of the development process and was carried out in accordance with *BS5837: 2012 Trees in relation to design, demolition and construction – Recommendations.*

1.2 Documents and Information Provided

I was provided with the following documents:

A copy of the proposed layout for plots 1 and 2. No drawing number.

A letter from Barnsley Metropolitan Borough Council Planning and Building Control requesting a tree survey.

1.3 Limitations

This report is concerned only with assessing the condition of the trees, their importance in the local landscape and any cultural and conservation values.

It takes no account of the affects the trees may have on the soil, such as heave where trees are removed or shrinkage where trees are retained.

Trees are dynamic organisms influenced by weather, pests and diseases. Therefore, this report can only remain valid for a period of 24 months.

Any works around the trees such as trenching, pruning, storage of materials and trafficking that has not first been approved by a suitably qualified arboriculturalist will invalidate this report.

No decay detection equipment was used to gather information on the condition of the trees.

All survey and inspection was completed at ground level.

2.0 Site Visit and Observations

2.1 Site Visit

The site visit took place on 10 April 2018. All dimensions were taken using recognised methodology and arboricultural measuring equipment, unless otherwise stated.

The weather at the time of inspection was dull and overcast. Visibility was good throughout and winds were light.

2.2 Brief Site Description

The site is currently a vacant plot of land to the south of Doncaster Road on the edge of Ardsley. There is housing on the eastern, southern and western boundaries.

The trees are confined to the eastern boundary. There is a mature beech hedge on the western boundary.

2.3 Development Proposals

The land has been divided into two development plots. Mr Wilcock is the applicant for plot 1 to the north and Mr Farrell is the applicant for plot 2 to the south. One dwelling with associated garage and driveway is proposed on each application site.

2.4 Tree Observations

All trees within the site of the proposed development were inspected in detail. Information on their size, condition and retention category is included in Table 1 below.

2.5 Locations of the Trees

The positions of the trees were plotted by me using fixed known points to triangulate from. I am not a land surveyor but I believe the positions are shown on the plans with sufficient accuracy for this report. If greater accuracy is required I recommend the services of a land surveyor are employed.

Table 1. The Tree Survey

Tree number	Species	Height (M)	Stem diameter (DBH in MM)	Branch spread (M)	Ht first branch above GL* (M)	Ht of canopy above GL (M)	Life stage	Vitality	General observations on the tree's condition	Estimated life in years	Category	RPA (m^2) if retained
1	Sycamore	12.5	240 & 280	North – 3.6 South – 1.0 East – 3.0# West – 3.0	2.5	4.0	Young mature	Normal	The tree has poor form but it does provide some useful tree cover as part of a group with Trees 2, 3 and 4.	20+	C (2)	42.7
2	Sycamore	12.0	270, 140, 120, 210, 260	North – 2.0 South – 1.6 East – 3.0# West – 4.3	2.0	4.0	Young mature	Normal	There are number of acute stem unions at the base resulting in poor form. These were stable at the time of inspection. There are bark wounds to the lower stem that are occluding well. The tree provides some useful tree cover on the frontage with Trees 1, 3 and 4.	20+	C (2)	68.7
3	Hawthorn	7.0	240 at 0.75	North – 2.0 South – 2.0 East – 2.0# West – 1.5	1.5	3.0	Young mature	Normal	A small tree growing as part of a group with Trees 1, 2 and 4. It has good form and, with the exception of small pruning wounds less than 3cm diameter, has no significant defects.	20+	C (2)	26.1
4	Beech	13.0	466	North – 2.0 South – 2.8 East – 3.0# West – 5.3	4.0	5.0	Young mature	Normal	The crown is weight biased to the west. There are a number of recent pruning wounds up to 20 cm diameter. The tree provides some useful tree cover on the frontage with Trees 1, 2 and 3.	20+	C (2)	98.3

5	Beech	13.5	584 @ base	North – 3.5 South – 4.8 East – 3.5# West – 3.5	3.0	3.0	Young mature	Normal	A good sized tree with multiple stems. There are a number of acute branch unions that were stable at the time of inspection. There are also a number of pruning wounds up to 20 cm diameter. The top layer of top soil has been removed some years ago from the north and west sides.	20+	C (1)	154.3
6	Beech	17.5	693	North – 5.3 South – 3.0 East – 4.0# West – 5.4	3.0	1.0 (over the site)	Mature	Normal	A large prominent tree. The crown and stem is weight biased to the east. This is a result of earlier competition from a tree that has since been removed rather than being the result of a mechanical defect. There is an acute branch union at 2.5m. This is a minor defect.	20+	B (1&2)	217.3
7	Ash	16.5	753	North – 4.0 South–7.0# East – 4.5# West – 7.3 N.west–8.8	3.5	2.5 (over the site)	Mature	Moder-ate	The tree is growing on neighbouring land. It is a large, prominent tree. There are two pruning wounds to the main stem that are 15 and 20cm diameter. There may be some internal decay as indicated by sounding with a mallet. However this is not considered to be extensive at this stage and there is sound wood around the entire circumference of the tree and no evidence of basal decay.	20+	B (1&2)	265.5

- Estimated * GL - Ground Level

3.0 Interpretation of Information and References

My interpretation and appraisal of information gathered from the survey is based on experience of tree species, visual risk hazard assessment and the guidance set out in BS5837:2012 *Trees in Relation to Design, Demolition, Construction – Recommendations*. My qualifications and experience in arboriculture are included in appendix 1.

3.1 BS5837:2012 Tree Retention Categories

All trees have been assessed and assigned a category in accordance with Table 1 of the standard. A copy of Table 1 is included as Appendix 2. This categorisation is intended to rank trees according to their importance in terms of quality, health, life expectancy, amenity and landscape value, together with wildlife and cultural importance. This ranking assists in determining the suitability and appropriateness of trees for retention in any development. Categories A to C are those considered for retention, 'A' being highest. Category 'U' trees are those not suitable for retention because of impaired condition.

Generally category A and B trees should be given more consideration in layouts that category C trees as these are considered more valuable because of their condition, landscape value, future life expectancy or, on occasions because of their more favourable habitat value.

3.2 Below Ground Constraints; Root Protection Areas (RPAs)

The root protection area is the area of land considered necessary for trees should they be retained as part of any development. This is calculated using the stem diameter measured at 1.5 metres from ground level. This protection area is shown diagrammatically as a circle centred on the base of the tree where it is expected that rooting has not been impeded in any one direction and where disturbance has not taken place. See Plan 1. Where rooting has been impeded or disturbance taken place then the shape and size of the root protection area is modified according to an assessment of where rooting is likely to take place.

Where trees are to be retained, it is optimal to locate structures and services outside the RPA. However, where incursion becomes necessary, technical solutions may be possible to limit damage, areas lost can be compensated elsewhere, or the soil environment can be improved. In these circumstances an arboricultural method statement will be necessary to ensure that works are undertaken sympathetically and do not damage the below ground parts of the trees.

3.3 Above Ground Constraints; Crown Spreads

Ideally, working areas and construction will be out with the crown spreads of trees to be retained. However where access by high sided vehicles and machinery for construction or erection of scaffolding is necessary within the crown spreads of trees to facilitate development an arboricultural method statement will be necessary to ensure pruning works are carried out sympathetically prior to construction works commencing.

Any permanent development within the canopy spread of a tree will also require a method statement. However, the effects of shade and other perceived inconveniences of trees this close to property should also be considered, together with the future growth potential of the trees and the maintenance obligation this will bring.

3.4 Conception and Design

The constraints imposed by trees should assist with site design and layout, together with the other competing needs of development. Generally the trees in the higher categories (A and B) should be given greater consideration in any layout than the lowest retention category (C).

As well as the footprint of buildings, the provisions of services, infrastructure layout and the access space required for construction itself should be considered.

4.0 Arboricultural Impact Assessment and Method Statement

4.1 Arboricultural Impact Assessment

Trees 1 and 2

The footprint of the dwelling for plot 1 would encroach slightly into the crown spread and RPA of Trees 1 and 2. This is a very small encroachment. The crowns of the trees could be pruned on their western side by shortening the lateral branches without detriment to the health or amenity of the trees. The encroachment into the RPAs is slight and would be tolerated by the trees.

Trees 3 and 4

These trees would be unaffected by the proposals.

Tree 5

The footprint of the dwelling for plot 2 would encroach very slightly into the RPA of this tree. The encroachment is so slight it will be of no detriment.

Trees 6 and 7

The garage associated with plot 2 would encroach significantly into the crown spreads and RPAs of these trees.

It would not be possible to retain the trees and construct the garage using conventional strip foundations.

It would be necessary to construct the garage on a raft foundation that avoids any excavation of the existing levels.

Assuming a suitable foundation can be designed the crowns of the trees could be pruned to accommodate the garage's position.

There is a marginal encroachment in to the northwest side of the RPA of Tree 6 by the dwelling. This would be of no consequence.

Any hard surfacing such as footpaths within the RPAs should be laid on the existing surface.

4.2 Arboricultural Method Statement

An arboricultural method statement will be necessary if the proposed layout is to be implemented.

A method statement would include details for the pruning required to the crowns of Trees 1, 2, 6 and 7.

A method statement would also address the matter of tree protection, including the position and design of protective fencing and the order in which the fencing and raft foundations would be implemented. This would include a tree protection plan.

4.3 Relevant Industry Standards and Codes of Practice

The main arboricultural industry standards and codes of best practice relevant to the planning and execution of this project are:

- BS 5837 (2012) – Trees in relation to construction – Recommendations;
- BS 3998 (2010) – Tree Work – Recommendations; and
- National Joint Utilities Guidelines, Volume 4 – NJUG Guidelines For The Planning, Installation And Maintenance Of Utility Apparatus In Proximity To Trees (Issue 2) (www.njug.org.uk)

4.4 General Precautions

The following general precautions should ensure the health and longevity of the retained tree. They should be enforced during the construction phase within the RPAs of the retained tree and under its canopy.

- All work will be carried out in accordance with a current risk assessment.
- All proprietary materials will be installed in accordance with their manufacturer's instructions and a current risk assessment.
- All equipment and tools will be used in accordance with their manufacturer's instructions and a current risk assessment.
- No storage of materials or fuel.
- No bonfires within 10m of the outer edge of the crown or RPA of a tree.
- No refuelling of mechanical equipment.
- No mixing of cement.
- No washing of cement mixers.
- No raising the soil level without the agreement of the Local Planning Authority (LPA).
- No excavations without the agreement of the LPA.
- Only operate or park vehicles and plant if the soil is suitably protected, as agreed by the LPA.

- The guidance contained within the National Joint Utilities Group Volume 4 (Guidelines For The Planning, Installation And Maintenance Of Utility Apparatus In Proximity To Trees (Issue 2, 2007); http://www.njug.org.uk/) will be followed when installing underground services within the rooting areas of retained trees. To minimise potential damage to tree roots excavations will be carried out by a pneumatic excavation lance.
- No materials will be dumped or stored within the RPA of a tree or under its canopy, whether in a skip or directly on the ground, unless the ground is suitably protected against contamination and compaction.

5.0 Conclusions

This report has been written for both plots 1 and 2.

There are seven significant trees along the eastern boundary of the two plots.

Two of the trees (Trees 6 and 7) have been included in retention category B because of their good health and mature status.

The remaining trees are included in the lowest retention category (C) because they are still relatively young and small and/or have poor form.

The proposals will have limited or no implications for Trees 1 to 5.

The garage for plot 2 encroaches significantly into the RPAs of Trees 6 and 7. It would not be possible to retain the trees and use a conventional foundation design.

To accommodate the garage in this position would require construction on a raft foundation that avoided any excavation of the existing soil levels.

6.0 Legal Considerations

Protected trees

No checks have been made with the Local Planning Authority for Tree Preservation Orders, other planning conditions or inclusion of the site in a Conservation Area. However, if any of the trees subject to this report are protected it will be necessary to apply to the local planning authority (LPA) for permission before any work, other than certain exempted operations, can be carried out.

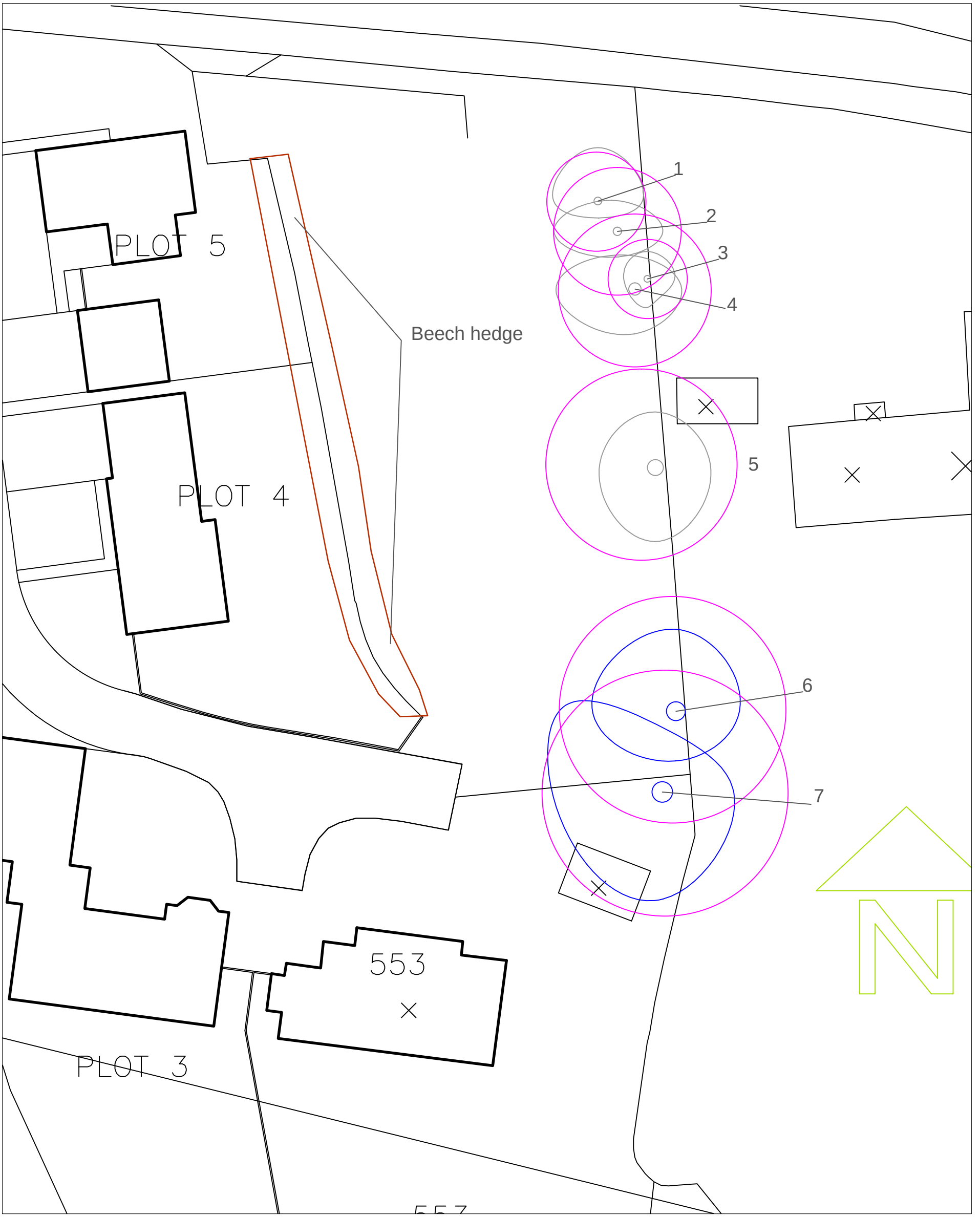
Wildlife conservation legislation

Breeding birds are protected, together with bats and their roosts, whether their roosts are in use or not.

Some of the larger trees may have some features useful to bats for roosting, particularly summer roosts such as loose bark and small cavities in structural branches.

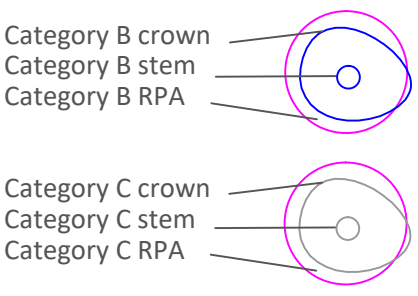
Consideration should be given to the presence of protected species prior to any proposed tree removal or maintenance. This will include breeding birds, principally between March and August, and bats at any time of year.

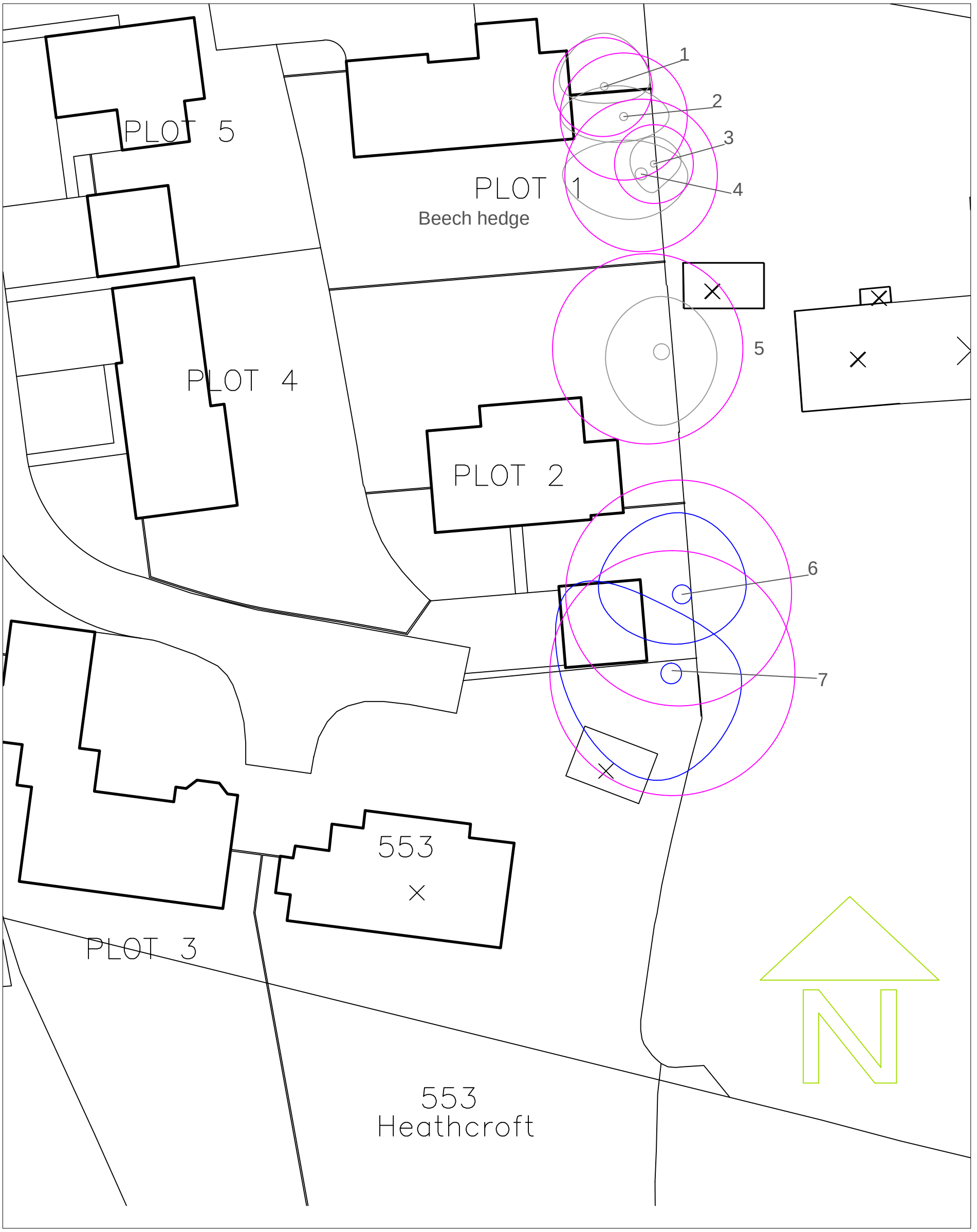
Tree surgeons should also be aware of their duties under legislation to protect wildlife and carry out their site assessment and work accordingly.



Plan 1 Tree Constraints Plan showing the existing layout

Key





Plan 2 Tree Constraints Plan showing the proposed layout

Key

Category B crown
Category B stem
Category B RPA

Category C crown
Category C stem
Category C RPA

Appendix 1. Qualifications and Experience of Ian Kennedy

1. Qualifications

Ian graduated from the Scottish Agricultural College in August 1995 with a Higher National Diploma in Horticulture (HND) with Distinction.

In 1998 Ian graduated from the University of Aberdeen with a BSc (Hons) Upper second class in Forestry with Arboriculture and Amenity Forestry.

He passed the LANTRA Professional Tree Inspection examination in 2006.

In 2009 his application to become a professional member of the Arboricultural Association was assessed to fulfil all the necessary requirements and he became a professional member of the Association that year.

In 2011 he passed the final examination of the Institute of Chartered Foresters and become a member of that institute in January 2012.

2. Practical experience

Presently Ian is working in private practice as an independent arboricultural and woodland management consultant undertaking tree conditions surveys, pre-development tree surveys to the BS5837:2012 standard, mortgage reports and woodland management planning works. Clients range from home owners and farmers to architects, building companies, local authorities, schools and larger development companies.

Prior to private practice Ian held a number of positions in local government. Firstly he was the arboriculturalist within a planning office in Essex. Ian gained considerable experience regarding trees in relation to development, in particular BS 5837.

Development work formed the core of his duties and applications ranged from small back garden developments to major schemes such as the redevelopment of Ministry of Defence land for private residential development. Ian also undertook all functions associated with

Tree Preservation Orders (TPOs), including the making of new TPOs, assessing suitability of applications to work on protected trees and trees in conservation areas.

Ian went on to managed a 500 hectare woodland estate for a local authority in South Yorkshire that included a mix of urban and rural woodlands. This included preparation and implementation of detailed management plans for multiply use woodlands. He undertook all aspects of silvicultural management from marking to contract tendering and monitoring. He also managed the access, conservation, landscape and archaeological requirements of the estate. Ian was directly involved in the estate achieving Forest Stewardship Council certification in 2003 and personally ensured continued certification.

Ian has worked extensively with Forestry Commission to obtain the necessary licences for management works and ensured the estate benefited fully from the full range of grants available.

Latterly at the same authority Ian went on to manage the trees and woodlands unit, having overall responsibility for management of the authority's tree and woodland stock and associated staff, together with delivery of other tree related services such as those associated with the Town and Country Planning Acts.

3. Continuing professional development

Ian regularly attends meetings, seminars and training events hosted by The Arboricultural Association. Institute of Chartered Foresters, Royal Forestry Society and Forestry Commission and benefits from the respective journals, briefings and newsletters available to members of the first three of the organisations listed.

4. Relevant experience

Ian Kennedy has spent 18 years working with trees, including as the arboricultural advisor to planning officers for a Local Planning Authority and manager of a trees and woodlands unit for another local authority with overall responsibility for trees, including in relation to the Town and Country Planning Acts.

Appendix 2. Tree Retention Categories

Table 1 **Cascade chart for tree quality assessment**

Category and definition	Criteria (including subcategories where appropriate)			Identification on plan
Trees unsuitable for retention (see Note)				
Category 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	• Trees that have a serious, irremediable, structural defect, such that their early loss is expected due to collapse, including those that will become unviable after removal of other category U trees (e.g. where, for whatever reason, the loss of companion shelter cannot be mitigated by pruning) • Trees that are dead or are showing signs of significant, immediate, and irreversible overall decline • Trees infected with pathogens of significance to the health and/or safety of other trees nearby, or very low quality trees suppressing adjacent trees of better quality *NOTE Category U trees can have existing or potential conservation value which it might be desirable to preserve; see 4.5.7.*			See Table 2
	1 Mainly arboricultural qualities	**2 Mainly landscape qualities**	**3 Mainly cultural values, including conservation**	
Trees to be considered for retention				
Category A **Trees of high quality** with an estimated remaining life expectancy of at least 40 years	Trees that are particularly good examples of their species, especially if rare or unusual; or those that are essential components of groups or formal or semi-formal arboricultural features (e.g. the dominant and/or principal trees within an avenue)	Trees, groups or woodlands of particular visual importance as arboricultural and/or landscape features	Trees, groups or woodlands of significant conservation, historical, commemorative or other value (e.g. veteran trees or wood-pasture)	See Table 2
Category B **Trees of moderate quality** with an estimated remaining life expectancy of at least 20 years	Trees that might be included in category A, but are downgraded because of impaired condition (e.g. presence of significant though remediable defects, including unsympathetic past management and storm damage), such that they are unlikely to be suitable for retention for beyond 40 years; or trees lacking the special quality necessary to merit the category A designation	Trees present in numbers, usually growing as groups or woodlands, such that they attract a higher collective rating than they might as individuals; or trees occurring as collectives but situated so as to make little visual contribution to the wider locality	Trees with material conservation or other cultural value	See Table 2
Category C **Trees of low quality** with an estimated remaining life expectancy of at least 10 years, or young trees with a stem diameter below 150 mm	Unremarkable trees of very limited merit or such impaired condition that they do not qualify in higher categories	Trees present in groups or woodlands, but without this conferring on them significantly greater collective landscape value; and/or trees offering low or only temporary/transient landscape benefits	Trees with no material conservation or other cultural value	See Table 2

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Appendix 3. Explanatory notes for terms used in this report

- **Compass Bearing:** N = north; S = south; E = east; W = west;
- **Age Class:** Assessed as either:
    - Young = a size which could be easily transplanted;
    - Semi-mature = prior to seed bearing age and could be transplanted with care;
    - Young Mature = early maturity, not fully grown but of seed bearing age and may have achieved mature height;
    - Mature = fully grown, annual growth is much reduced;
    - Old Mature = old for the species, possibly starting to decline;
- **Trunk Diameter:** These figures relate to the diameter of the trunk at a given distance above ground level and are recorded in centimetres measured with a diameter tape.
- **Estimated size:** #
- **Health:**
    - Normal Vitality = normal growth and twig extension;
    - Moderate Vitality = reduced twig extension but other than that few signs of ill-health;
    - Early Decline = reduced twig extension and some dead twigs in the outer canopy;
    - Mid-decline = small internodes, the canopy may be thinning and contain dead twigs and/or branches in the outer canopy, older branch wounds that haven't occluded may be decaying and forming cavities;
    - Severe Decline = sparse crown, numerous dead twigs and branches in the outer canopy, older branch wounds likely to be decaying and forming cavities;
    - Dead.
- **Structural Condition**
    - Acute stem union = a weak union between two or more stems at the main forking point caused by the formation of reaction wood. Mechanical pressure at the forking point increases as secondary thickening occurs increasing the risk of failure at that point.
    - Acute branch union = the same principle as acute stem unions but between a stem and a branch or two branches rather than 2 main stems.

Wharncliffe Trees and Woodland Consultancy
16 Hartcliffe View
Thurgoland
SHEFFIELD
S35 7BD
0114 288 5501

0789 148 8303

info@wharncliffetwc.co.uk

www.wharncliffetwc.co.uk