

Proposed Dwelling adjacent Holly Cottage

Old Mill Lane

Thurgoland

Phase 2 Pre-development Arboricultural Report

Prepared at the request of Mr G Wilkinson

On behalf of

Mr and Mrs Evans

28 April 2020

By

Ian Kennedy

Wharnccliffe Trees and Woodland Consultancy

F.A.O. Hannah Andrew

2019/1104

- 1 Plan reduced in size (dwelling)
- 2 Section through site
- 3 Tree Survey.

Apologise for print problem
with tones awaiting service eng.

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Proposed dwelling adjacent Holly Cottage

Old Mill Lane

Thorold

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Jan Kennedy

Wharnciffe Trees and Woodland Consultancy

Summary

I have been instructed by Mr G Wilkinson on behalf of Mr and Mrs Evans, the applicants, to carry out a pre-development tree survey of trees in proximity to a proposed detached dwelling on land adjacent to Holly Cottage, Old Mill Lane, Thurgoland.

The location, crown spread and root protection areas (RPAs) of five individual trees growing on the application site have been recorded, together with two trees in the neighbouring garden. These trees are growing close to the boundary. The RPAs cannot be shown as circles centred on the stems of the trees because the land rises steeply immediately to the north and drops by approximately 2m to the south to the river. The RPAs are more likely to be longer and more linear than normal, following the edge of the river.

Table 1 records information about the trees, including their species, dimensions, age, life expectancy, retention category and root protection area. This information was collected, interpreted and recorded in accordance with BS5837:2012 *Trees in relation to design, demolition and construction – Recommendations*.

Plan 1 shows the trees, including their crown spreads and root protection areas in the context of the existing layout. Plan 2 shows the proposed layout.

All but one of the trees have been included in retention category B (2) because of the value they provide as a cohesive group as part of the well treed landscape along the river edge. One tree, an elm, is included in the lowest retention category C. It is a young tree that is likely to become infected by Dutch elm disease once it reaches the critical size for the elm bark beetle to feed on its bark and spread the pathogen.

The trees on the application site are growing at the bottom of a steep slope on the river's edge.

The proposed dwelling and parking spaces would have no impact on the existing trees because the footprint of the development is outside of all the crown spreads and root protection areas.

The proposed terraced garden area would require some excavations within the RPAs of the trees and would require the removal of Tree 2. However, the impact of the terracing works on the trees appears more significant on a two-dimensional plan than is likely to be the reality because the trees are growing at a much lower level than the proposed garden.

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1.0 Introduction

1.1 Instruction

I have been instructed by Mr G Wilkinson on behalf of Mr and Mrs Evans, the applicants, to carry out a pre-development tree survey of trees growing on the application site for a proposed detached dwelling adjacent Holly Cottage, Old Mill Lane, Thurgoland.

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 drawing showing the proposed layout and elevations produced by Mr Wilkinson.

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 about the trees.

All survey and inspection was completed at ground level.

Site Visit and Observations

not to be used 0.1

2.1 Site Visit

not to be used 1.1

The site visit took place on 27 April 2020. All dimensions were taken using recognised methodology and arboricultural measuring equipment, unless otherwise stated.

The weather at the time of inspection was dry and overcast with good visibility. Winds were light.

2.2 Brief Site Description

The land on which the dwelling is proposed is to the west of Holly Cottage and immediately south of Old Mill Lane, Thurgoland at Ordinance Survey grid reference SE 2919 0006. The land is currently a garden for Holly Cottage.

The land is flat in the northern part of the site but slopes very steeply down to the River Don.

The trees on the application site are growing in a line along the edge of the river at the bottom of the steep slope.

The two trees on the neighbouring land are growing further to the north than the line of trees on the application site.

2.3 Development Proposals

The development proposes a detached dwelling to the west of Holly Cottage in the northern part of the application site close to Old Mill Lane where the land is flat. The steeply sloping land would become a terraced garden.

2.4 Tree Observations

The trees and shrubs included in this report were inspected in detail and the information on their size, condition and retention categories is included in Table 1 below.

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
1	Alder (two stems)	12.0	300 & 300	North - 3.0 South - 4.0# East - 3.0 West - 1.0	4.0	4.0	Young mature	Normal	Two stems growing closely together next to the gabions by the river. The tree is in good health with no significant defects.	20+	B (2)
2	Alder	12.0	260	North - 4.3 South - 1.3 East - 2.2 West - 1.5	5.0	5.0	Young mature	Normal	A healthy tree with no significant defects growing next to the gabions by the river.	20+	B (2)
3	Elm	10.0	250	North - 4.0 South - 7.0# East - 4.5 West - 4.7	2.0	1.5	Juvenile mature	Normal	A healthy young tree growing by the river. The tree has no significant defects at the moment but it is likely that the tree will become infected with Dutch elm disease within the next ten years.	10+	C (1)
4	Alder (two stems)	12.0	300 & 350	North - 3.0 South - 4.0# East - 3.0 West - 2.0	4.0	4.0	Young mature	Normal	Two stems growing closely together next to the gabions by the river. The tree is in good health with no significant defects.	20+	B (2)

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 than 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 normally 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. However, at this property the land immediately to the south of the trees is retained by gabions to a height of 2m. The RPA of the trees ends at the edge of the gabions. Also, the land rises steeply immediately to the north of the trees. Whilst it is difficult to know precisely where the RPAs are, they are likely to extend in a longer, linear shape along the edge of the river.

Where trees are to be retained, it is optimal to locate structures and services outside the RPAs.

3.3 Above Ground Constraints; Crown Spreads to stabilize ground 0.8

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.

3.2 Below Ground Constraints; Root Protection Areas (RPAs)

[illegible]

Where there are to be retained, it is optimal to locate structures and services outside the

4.0 Arboricultural Impact Assessment

The dwelling and parking spaces

Both the dwelling and the parking spaces would be outside the crown spreads and RPAs of all of the trees and would therefore be unaffected by the proposals.

The terraced garden

The area proposed for the terraced garden is within the RPAs of all of the trees on the site. However, the excavations required to create the terraced garden area will be on the upper slopes of the site. Rooting close to the soil surface where the excavations would take place is likely to be limited. I would expect that many roots will follow a more linear course along the river edge.

The excavations for the terracing would however require the removal of Tree 2 because the excavations are so close to the tree.

Impact of shading on the dwelling and garden.

The trees are growing at a significantly lower level than the position of the new dwelling. Most of the trees are alders. These have relatively small and light crowns compared with many other species. The elm is likely to become infected by the Dutch elm disease pathogen once the tree reaches a critical size when the elm bark beetle will begin feeding on the bark. All these factors together will help to reduce the impact of shading on the dwelling itself. However, shading on the terraced garden area will be more significant.

The removal of Tree 2, together with the most northerly of the sycamore stems would increase light levels reaching the garden area. This would also help to move the root protection area to the south.

Trees on the neighbouring property.

The trees in the neighbouring garden would be unaffected by the proposals.

memorandum to the President, dated 1954, and a letter to the President, dated 1954, both of which are attached to this report.

One of the trees, an elm, is included in the lowest retention category because there is a high chance that it will die from Dutch elm disease within the next ten or so years.

The proposed terraced garden would encroach into the RPAs of the trees on the application site. However, the exact position of the RPAs for the trees is somewhat unknown given the close proximity of the very steep slope to the north.

Tree 2 would need to be removed to accommodate the garden area. I would also recommend removing the most northerly of the five sycamore stems. This would increase light levels to the garden and move the RPA to the south taking it further away from the garden area.

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.

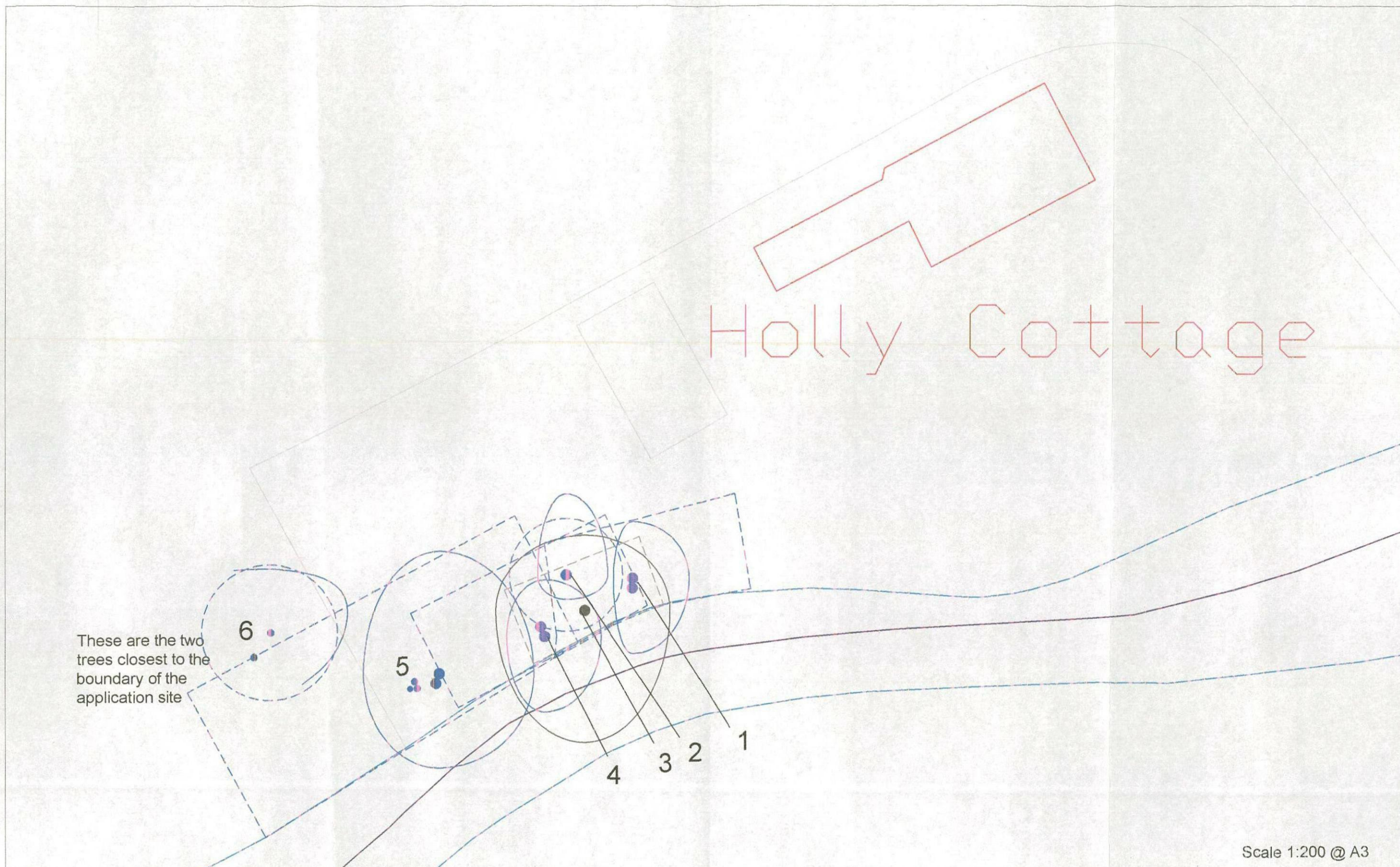
Wildlife conservation legislation

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

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.

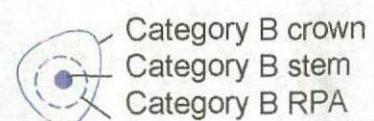
Tree surgeons should also be aware of their duties under legislation to protect wildlife and carry out their site assessment and work accordingly.

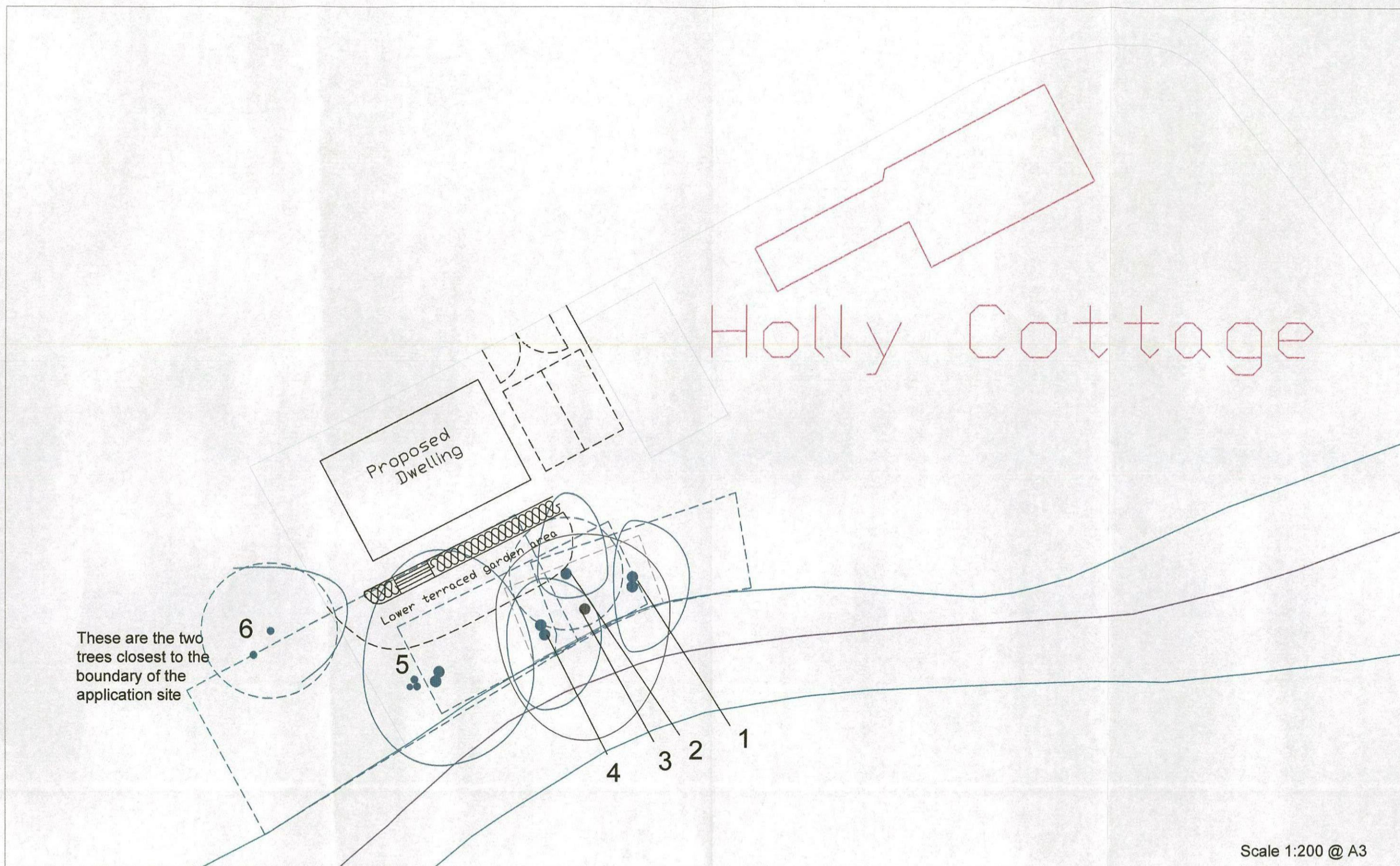
There is a very high chance that birds are breeding in the shrubbery at the moment. Breeding activity could go on into July.



Scale 1:200 @ A3

Plan 1 Tree Constraints Plan showing the existing layout





Plan 2 Tree Constraints Plan showing the proposed layout



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 became 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 manage 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 multiple 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 20 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, irreparable, structural defect, such that their early loss is expected due to collapse, including those that will become unstable 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
Trees to be considered for retention		
Category A Trees of high quality with an estimated remaining life expectancy of at least 40 years	1 Mainly arboricultural qualities 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)	2 Mainly landscape qualities Trees, groups or woodlands of particular visual importance as arboricultural and/or landscape features
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
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 with material conservation or other cultural value
		Trees with no material conservation or other cultural value

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.

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2019/1104

SECTIONAL DETAIL OF SITE - PROPOSED DWELLING

ADJACENT TO HOLLY COTTAGE, OLD MILL LANE, THURGOLAND.

SCALE: 1-100.

