# Land north of Shaftsbury Drive, Hoyland, S74 0HW

## Pre-development Arboricultural Report prepared at the request of

## Peter Thompson Architect

**31 August 2015**

**By**

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**Wharncliffe Trees and Woodland Consultancy**

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## Summary

I have been instructed by Peter Thompson Architect to carry out a pre-development tree survey of the significant trees within and immediately outside the red line area of the site of a proposed bungalow in the grounds of South Grove, Hoyland.

The location and spread of two individual trees and one group of 14 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 from damage during development.

All of the trees have been categorised as 'C' (shown grey on Plan 1). Trees 1 and 2 have been pollarded in the past at between 5 and 7m, preventing them being included in a higher retention category. Tree 2 also has a significant, large bark wound that is developing into a cavity as it decays. The trees in the group along the southern boundary have no great arboricultural merit and are likely to become structurally unsound as they grow and develop. No trees have been categorised 'A' or 'B', the highest retention categories for important or significant trees and no trees have been categorised 'U' because of declining health or major structural deficiencies.

I have been provided with a copy of a proposed layout as a pdf file. This is included as Plan 2. Trees 1 and 2 would need to be removed to implement the development. Both trees are category C trees due to previous management practices or impaired condition. The group of trees along the southern boundary (3) would need to be removed to accommodate the proposed boundary wall. I don't consider these to be suitable to retain in the long term next to a dwelling in any case. These were probably planted as a hedge that has developed into a line of trees due to a lack of management. Many are multi-stemmed, some developing from old pruning cuts. This type of stem union has a tendency to fail as the trees grow and the stems increase in weight. It may be possible to replace these behind the wall with species that will provide better long term amenity.

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## 1.0 Introduction

## 1.1 Instruction

I was instructed by Peter Thompson Architect to carry out a pre-development tree survey of the trees on a plot of land in the grounds of South Grove to the north of Shaftsbury Drive, Hoyland.

The tree survey is intended to provide a structured, impartial assessment of the tree population within the red line area proposed for development, together with any trees on neighbouring land that could be affected by development.

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:

Topographical Survey prepared by Turnbull Surveying. Drawing No: S1017. Dated August 2015.

Proposed site layout from Peter Thompson Architect.

## 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.

No checks have been made with the local planning authority regarding Conservation Area status, Tree Preservation Orders or other planning restrictions.

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 28 August 2015. All dimensions were taken using recognised methodology and arboricultural measuring equipment, unless otherwise stated.

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

## 2.2 Brief Site Description

The site of the proposed development currently forms part of the garden of South Grove House, Hoyland. The area of land is roughly rectangular in shape and is located to the north of Shaftsbury Drive. The plot is at a slightly elevated position from Shaftsbury Drive. There is a line of mainly conifer trees along the southern boundary of the site with Shaftsbury Drive. There are two mature lime trees in the south western corner of the site.

## 2.3 Development Proposals

According to the layout provided by Peter Thompson Architect a detached bungalow is proposed in the centre of the plot with a garage on the western boundary and an associated access from Shaftsbury Drive.

## 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.

## 2.5 Locations of the Trees

The locations of trees were plotted and recorded on a topographical survey that has been supplies to me for the purposes of preparing this report. The locations of the trees on the topographical survey have been used in this report.

## 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.

## 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, demolition 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 demolition or 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.

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

## 3.5 Proposed Site Layout

Comments in this report relate to the proposed layout supplied by Peter Thompson Architect and included as Plan 2 in this report.

## 4.0 Arboricultural Impact Assessment

## 4.1 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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| T1 | Silver lime | 16.2 | 650 & 600 | North – 7.0<br>South – 6.3<br>East – 7.3<br>West– 6.0# | 2.5 to west | 2.0 to east | Mature | Normal | There are two stems from 1.2m. The union is stable. The tree has been pollarded in the past at around 7.5m with approximately 10m of regrowth from the pollard points. These unions appear stable at present.<br>There is a bark wound on south side of the crown where a branch has failed. There is no decay present.<br>There are a number of small dead lateral branches throughout the crown. | 20+ | C (1) | |
| T2 | Silver lime | 16.0 | 600 & 600 | North – 4.6<br>South –4.0#<br>East – 7.0<br>West – 6.0# | 2.0 to north | 1.5 to north | Mature | Normal | There are two stems from the base forming an acute stem union that appeared stable at the time of inspection. There is a large decay cavity on the southern stem from the base to 2m. This is a moderate defect.<br>Only a limited inspection of the base was possible due to variation in ground levels and fencing. | 10+ | C (1) | |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | The tree has been pollarded at between 5 and 7m.<br>The crown is weight biased to the south.<br>There are a number of pruning wounds that have occluded well. | | | |
| G1 | Group of 12 Leyland and Lawsons cypress and 1 beech. | 8.0 - 10.0 | 140 to 200 | North – 2.0<br>South – 2.0<br>East – 2.0<br>West – 2.0 | 1.5 | 0.5 to north | Young Mature | Normal | A line of conifers that were possibly planted as a hedge. They have now grown into a line of trees. They are not particularly attractive trees. Many are multi stemmed. Some stems have acute stem unions. | 10+ | C (1) | |

# Estimated * Ground Level

## 4.2 Hedges and other vegetation

There is group of hawthorn and privet shrubs on the southern boundary to the east of the line of conifer trees.

## 4.3 Impact Assessment of Proposed Layout on Existing Trees

Tree 1 and 2

These would both be lost to the proposed layout to create access off Shaftsbury Drive and to construct the garage. Tree 1 is growing in the footprint of the proposed garage and ground level differences between Shaftsbury Drive and the site is likely to require changes in levels that would impact on Tree 2. Both trees are category C trees due to previous management works and, in the case of Tree 2, significant defects.

Group 3

This group of trees would need to be removed to accommodate the access point and the new boundary wall. However, they are of poor form and quality. Many are multi-stemmed and some have acute stem unions. As these trees grow larger there is a chance that some of the stem unions will fail. Furthermore, whilst the line of trees provides a screen between the development plot and Shaftsbury Drive, the trees themselves have very low amenity value. For these reasons I would recommend felling all of these trees in any case and replanting with more suitable species behind the wall at the eastern end of the southern boundary and between the dwelling and the access point.

## 4.4 Arboricultural Method Statement

It is important that a method statement appropriate to the scale of development around existing trees is prepared, particularly where development or access is necessary within the crown spreads and RPAs of retained trees. This should address any eventuality that may involve working within the root protection area or crown spreads of existing trees and might include the following:

Removal of existing structures and surfaces.
New hard surfacing and structures.
Changes to levels.
Installation of specialist foundations.

Excavations, including trenchless techniques for services.
Landscaping, included changes to levels and movement of soil.

It would be necessary to remove Trees 1 and 2 and Group 3 to accommodate the proposed layout. An Arboricultural Method Statement is not therefore necessary.

## 4.5 Tree Protection Plan

Protective fencing will not be necessary as no trees are to be retained within the proposed layout.

## 4.6 New Planting

There may be some opportunities to plant new trees towards the eastern boundary of the plot and on parts of the southern boundary away from the dwelling itself.

## 5.0 Conclusions

All of the trees have been included in retention category C. This is the lowest of the three retention categories.

Trees 1 and 2 have been subject to previous management practices that impairs their structural condition.

Tree 2 also has a large developing decay cavity on one of its main stems between the base and 2m.

The trees in Group 3 have low amenity value and are likely to develop structural difficulties as they develop.

The proposed layout would require removal of Trees 1 and 2 and Group 3.

## 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.

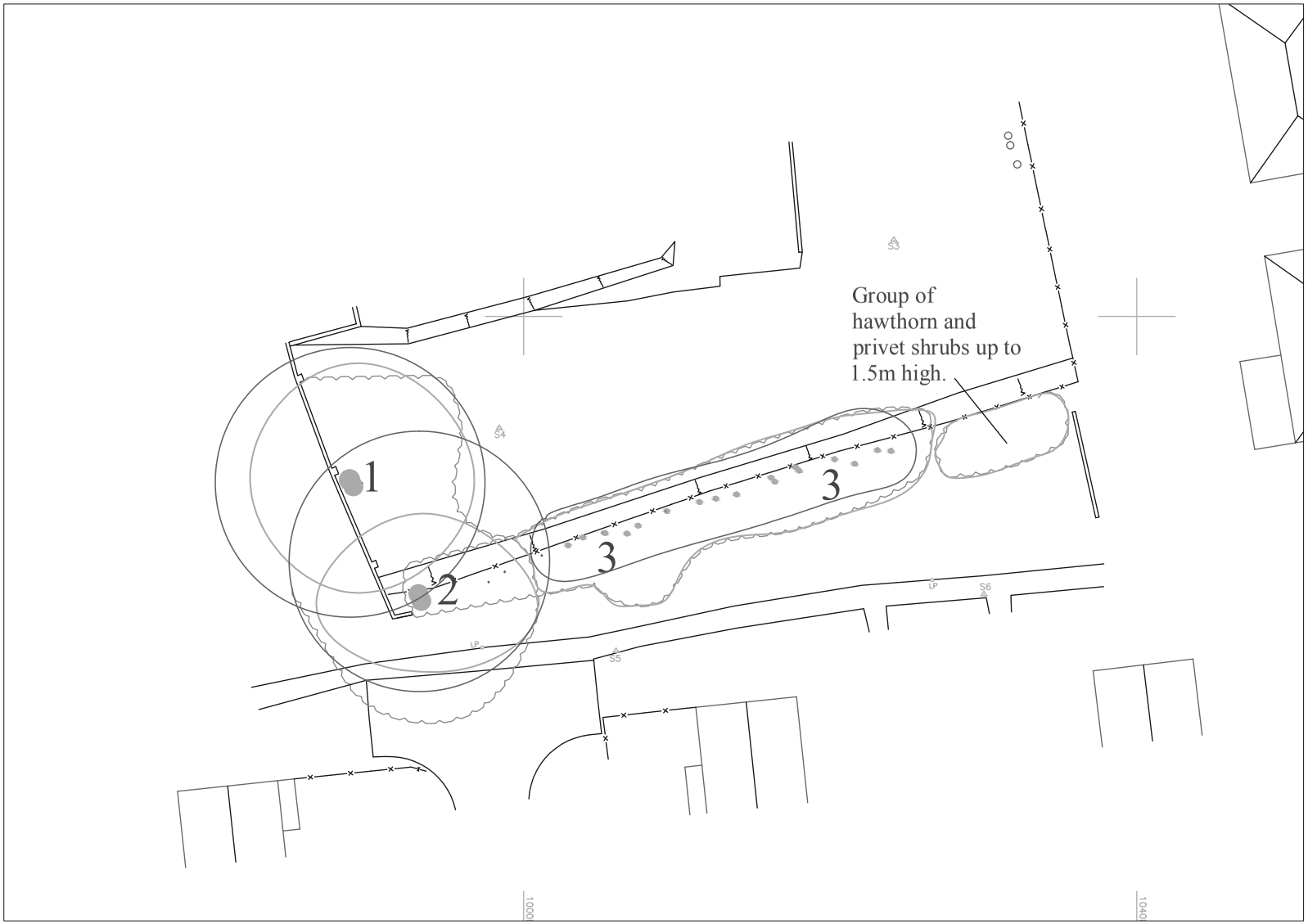
Wildlife conservation legislation

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

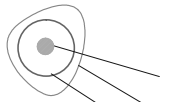
Consideration should be given to the presence of protected species prior to any proposed tree removal or maintenance. This will include breeding birds, principally between March and August, and bats at any time of year.

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

# Land north of Shaftsbury Drive, Hoyland




Key



Category C tree
tree stem
crown spread
root protection area

Plan 1. Tree Constraints Plan showing the existing layout

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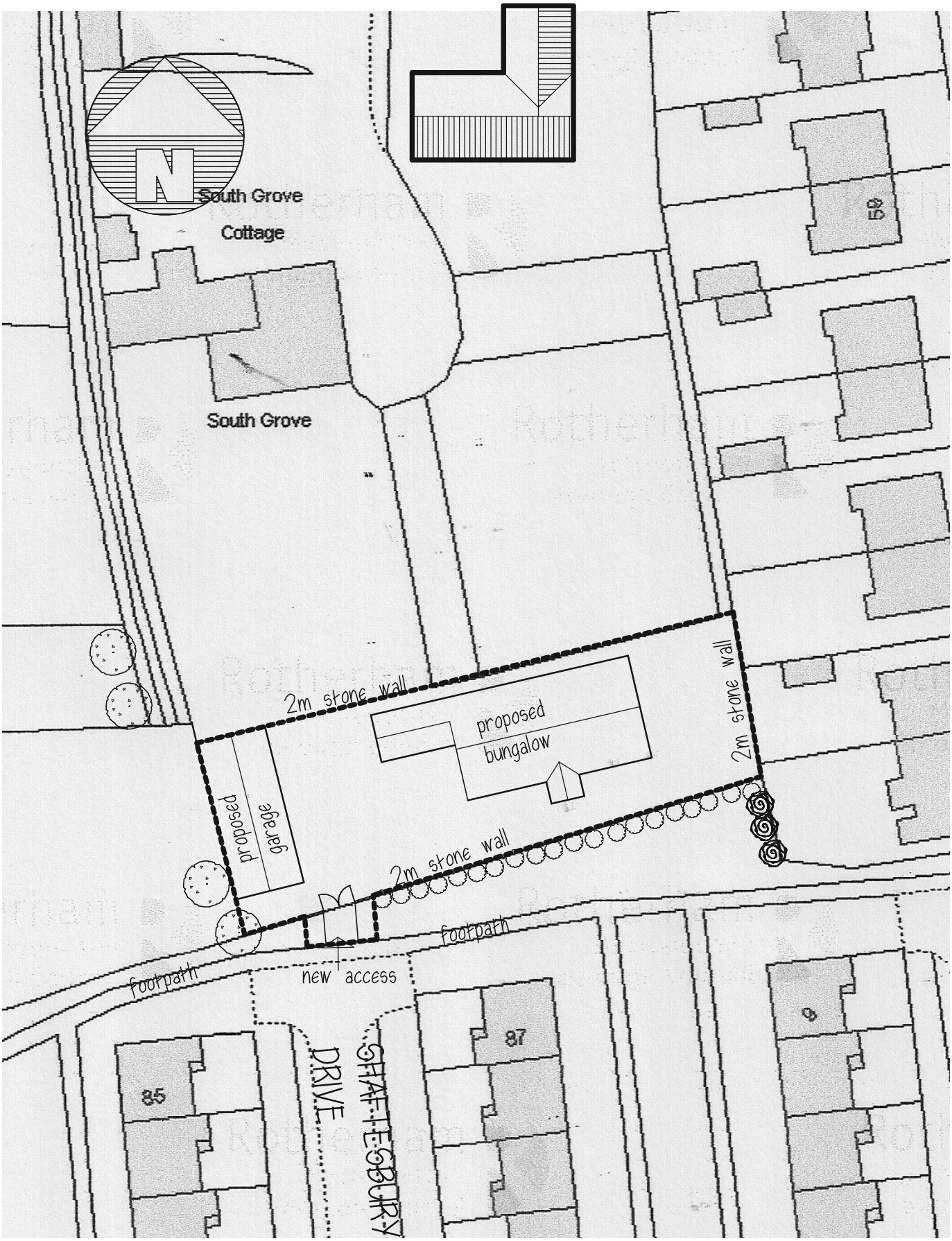
31 August 2015

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PROPOSED BUNGALOW
OFF SHAFTESBURY DRIVE
HOYLAND
SITE PLAN 1:500@A4


Linwood
Barnsley Road
Dodworth
Barnsley S75 3JR

# 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 15 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**<br>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)<br>• Trees that are dead or are showing signs of significant, immediate, and irreversible overall decline<br>• 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<br>*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**<br>**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**<br>**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**<br>**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.