Soar and Sons, Tank Row, Barnsley

Pre-development Arboricultural Report

prepared at the request of

Peter Thompson Architect

12 April 2016

By

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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 in the northwest corner of the Soar and Sons electrical recycling site to the south of Tank Row, Barnsley and to assess the impact of constructing a new workshop.

The trees comprise one concise woodland block. The location and extent of the crown spreads of the woodland is recorded on Plan 1 that shows the existing layout. Table 1 records the tree species, dimensions, ages, 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 to retain the woodland.

The woodland has been categorised as 'C' (shown grey on Plan 1) because of the young age and small size of the trees. The diameter of many of the trees is typically 100 to 140mm. This is smaller than BS5837: 2012 considers to be significant and suggests that trees smaller than 150mm should be included in retention category C, the lowest retention category. Some of the alders are up to 255mm in diameter.

I have been provided with a copy of a proposed layout and this is included as Plan 2. Most of the woodland block would need to be removed to accommodate the proposed workshop. The woodland does help to provide some screening of the site from the public highway but the woodland is not important or significant given the age and quality of the trees. Some trees could perhaps be retained to the east of the workshop, subject to the extent of any hard surfacing proposed around the workshop. However, the trees that would be retained would be of low value. If planning consent is granted I would recommend removing all of the trees and replanting them with better quality trees in the space available. There may also be opportunities to plant a new hedge along the northern boundary of the site to provide some screening. I would recommend a mixed native species hawthorn hedge rather than a conifer hedge such as Leyland cypress.

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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 woodland area in the northwest corner of the Soar and Sons electrical recycling site at Tank Row, Barnsley.

The tree survey is intended to provide a structured, impartial assessment of the tree population 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 dated January 2015, drawn by NT. This drawing also shows the proposed layout.

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 10 March 2016. All dimensions were taken using recognised methodology and arboricultural measuring equipment, unless otherwise stated.

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

2.2 Brief Site Description

The site is a large industrial site used for recycling electrical equipment and is mostly surfaced with concrete and contains a number of buildings. The site is immediately to the south of Tank Row, Barnsley. The woodland occupies a small linear area in the northwest corner of the site immediately to the south of Tank Row. The woodland is 20m wide at its widest point approximately 80m long.

2.3 Development Proposals

According to the layout provided by Peter Thompson Architect a new workshop 50m by 15m is proposed in the northwest corner of the site in the area currently occupied by much of the woodland.

2.4 Tree Observations

The woodland was inspected and information on the size, species and condition of the trees is included in Table 1. This information was used to assess the retention category of the woodland.

2.5 Locations of the Trees

The locations of the woodland's canopy edge was plotted and recorded on a topographical survey that has been supplies to me for the purposes of preparing this report. The location of the woodland canopy on the topographical survey has 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

The woodland has been assessed and assigned a retention 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. In this report the root protection area has been drawn around the edge of the woodland. The RPA has been defined by the diameter of the largest trees on the edge on the woodland. 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
W1	Italian alder, Robinia, hornbeam, ash, field maple, Sessile oak, hawthorn	Up to 10m	Up to 255	North – 2.0 South – 2.0 East – 2.0 West– 2.0	GL	GL	Juvenile mature	Dead to Normal	A mixed broadleaved woodland. The dominant species is alder. These are the largest diameter trees and many have the best form. Field maple is also relatively common, followed by occasional Robinia, Sessile oak, ash and hawthorn. Some of the Robinia is dead. The typical stem diameter of the trees is between 100 and 140mm. The alder has the largest stem diameters at up to 255mm. The quality of the woodland is quite low on account of its small size and the relatively short life expectancy of the main species. The woodland does however have some value in providing a landscape screen to the site from Tank Row.	20+	C (1)	2.5 from the edge trees.

Estimated * Ground Level

4.2 Hedges and other vegetation

There is a Leyland cypress hedge around the edge of the woodland on the boundary of the site. This has grown to between 1.5 and 2.0m tall. The foliage is quite sparse due to the shade cast by the trees in the woodland.

4.3 Impact Assessment of Proposed Layout on Existing Trees

The greatest majority of the woodland would need to be removed to accommodate the new workshop. There may be some opportunity to retain some trees to the east of the workshop but this would depend on the extent of any hardstanding that might be proposed to the east of the workshop.

Whilst the woodland does provide screening of the site from the highway it has been included in the lowest retention category because of its small size, young age and the relatively poor form of many of the trees. BS5837: 2012 suggests that trees less than 150mm diameter should only be included in the lowest retention category.

If planning consent is granted for the workshop I recommend removing all of the trees and the boundary hedge, rather than just the trees that would be in the footprint of the development. The trees and hedging that would remain would have very low amenity value following removal of the neighbouring trees. It would be preferable to plant a new hedge along the boundary for screening if space is available between the boundary and the new workshop. Because the existing trees are only young new plants could quickly become established as replacements. I recommend planting a mixed native hedge of hawthorn, hazel, guelder rose and field maple.

5.0 Conclusions

The woodland has been included in retention category C. This is the lowest of the three retention categories because of the young age of the trees.

Much of the woodland would need to be removed to accommodate the new workshop.

Whilst the trees provide some screening of the site from the highway, if sufficient space is provided on the boundary then a new hedge can be established to provide screening into the future.

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.

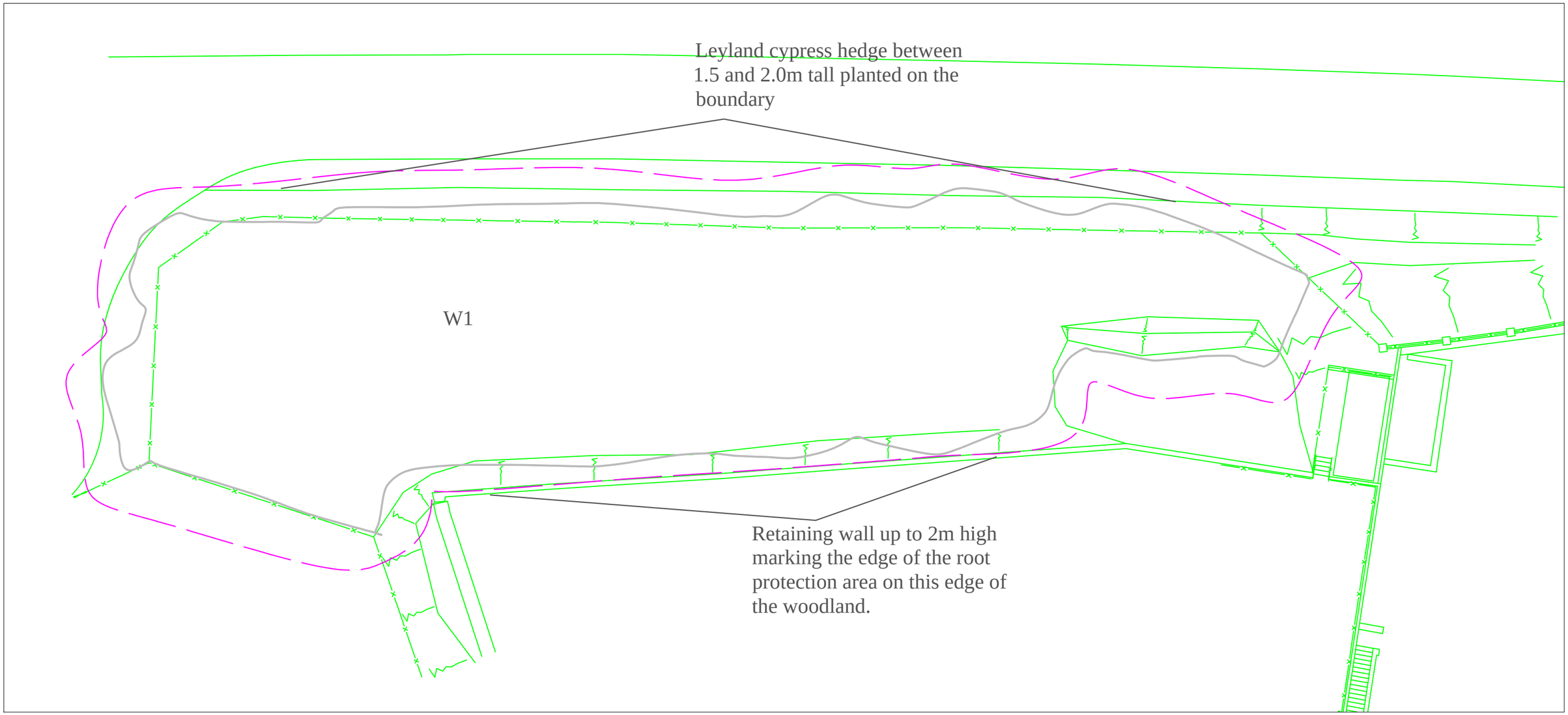
Consideration should be given to the presence of protected species prior to any proposed tree removal or maintenance. This will include breeding birds, principally between March and August, and bats at any time of year.

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

Felling licences

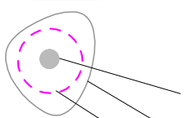
A felling licence would be required if felling more than 5 cubic metres of timber a calendar quarter, or 3 cubic metres a quarter if the timber is to be sold. A licence is only required in respect of trees that have a diameter at 1.3m of greater than 8 cms or, in the case of thinnings 10 cm at 1.3m or 15cm at 1.3m when coppicing. A felling licence would not be required to remove trees necessary to implement a planning consent.

Soar and Sons, Tank Row, Barnsley



Plan 1. Tree Constraints Plan showing the existing layout

Key



Category C tree/woodland
tree stem
crown spread
root protection area

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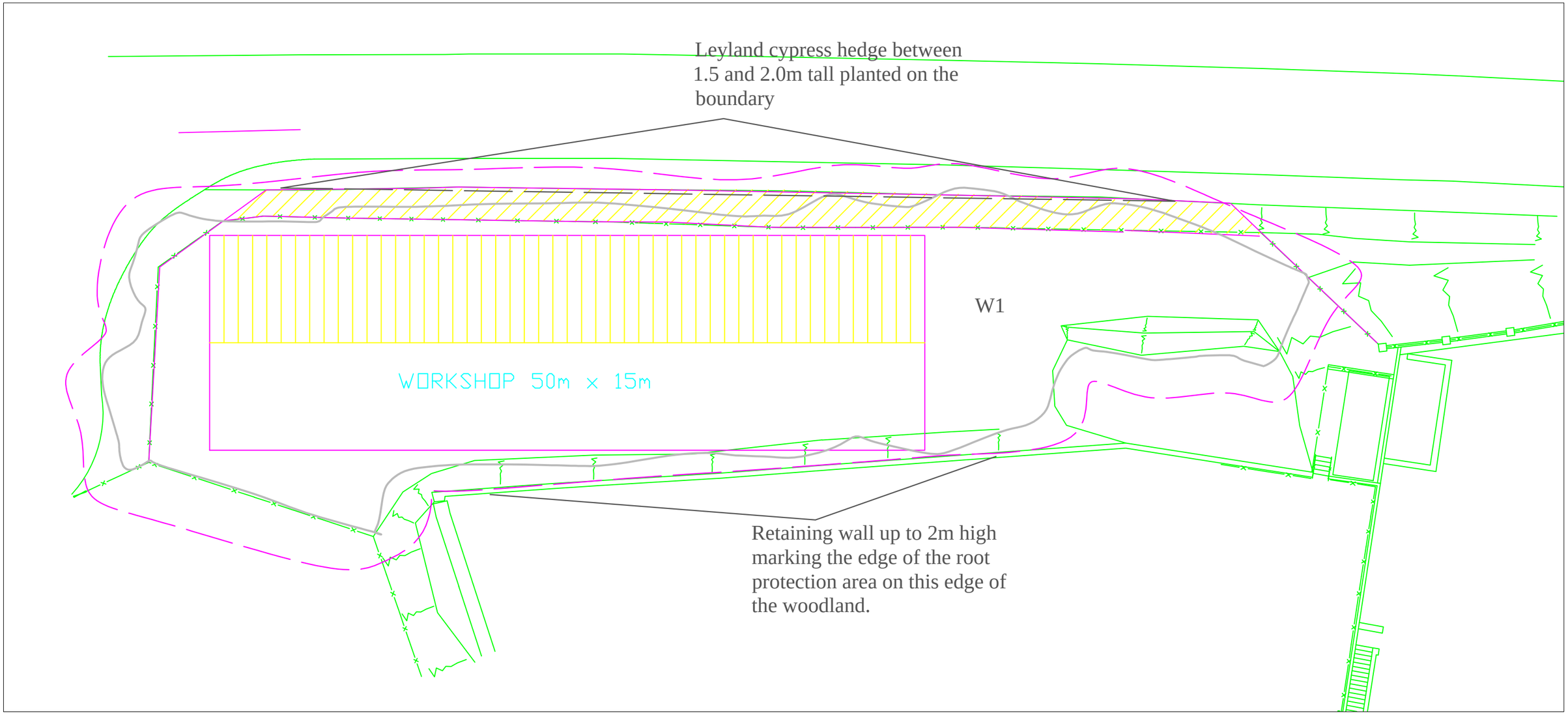
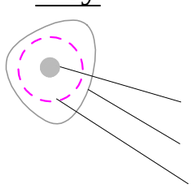


Plan 2. Tree Constraints Plan showing the proposed layout

Key



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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 16 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

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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