Land at 21 Honeywell Lane, Barnsley, S75 1DA

Pre-development Arboricultural Report prepared at the request of

Peter Thompson Architectural Design Consultant Ltd

11 February 2014

By

Ian Kennedy

Wharncliffe Trees and Woodland Consultancy

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Summary

The location and spread of eight individual trees and one group of three trees are recorded on Figure 1. 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*.

Figure 2 shows the root protection areas (RPA) that would be required for each tree should it be retained as part of a development.

All but one of the trees has been categorised 'C' (shown grey on Figure 1). These are trees that have impaired condition due to previous management practices, are supressed by neighbouring trees or have limited amenity value.

Only Tree 1 has been categorised 'B' (shown blue on Figure 1) because it contributes significantly to the local amenity.

No trees have been categorised as 'A'. These are the highest category trees because of their contribution to the landscape and their favourable condition.

No trees have been categorised as 'U'. These are trees that are dead, in severe decline or in such impaired condition due to defects or pests and diseases that they are not expected to be retained for longer than ten years within the current land use.

A number of the trees appear to outwith the boundary of the site but may be affected by a proposed layout because they are growing close to the boundary.

As a group these trees contribute to the amenity of the area but none have any appreciable merit as individuals.

The proposed siting of the bungalow will require removal of Tree 7. This is one of the poorer trees on the site due to previous management practices and has been given the lowest retention category.

The loss of only one category 'C' tree from a population of 11 identified in the survey will ensure the amenity provided by trees in the area is protected.

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1.0 Introduction

1.1 Instruction

I was instructed by Peter Thompson Architectural Design Consultant to carry out a pre-development tree survey of trees on land between 21 and 23 Honeywell Lane, Barnsley, S75 1DA.

1.2 Documents and Information Provided

I was provided with a plan by Peter Thompson Architectural Design Consultant Ltd that shows the proposed location of the bungalow.

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 for constraints such as Tree Preservation Orders, Conservation Area status or other planning restrictions.

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 February 2014 between 09:00 and 10:45 hours. All dimensions were taken using recognised methodology and arboricultural measuring equipment, unless otherwise stated. A number of the trees were inaccessible because they were on neighbouring land and because of the sharp changes to levels on parts of the southern boundary. The dimensions of these trees were estimated.

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

2.2 Brief Site Description

Honeywell Lane is a residential street to the north of Barnsley town centre. The site is located to the east of 21 and south of 23 Honeywell Lane at grid reference SE 34161 07278. The site is currently maintained as garden on the frontage with Honeywell Lane, comprising a lawned area with shrubs. Towards the back of the site and to the rear of 23 Honeywell Lane the vegetation is dominated by ivy. Tree cover is confined to the boundaries of the site and in neighbouring gardens. The land rises sharply on the southern boundary, particularly the south western boundary where there is a 3m height difference between the site and the properties on Cockerham Avenue.

There is an open fronted stone outbuilding located towards the southern site boundary.

2.3 Proposed Site Layouts

I have been provided with a plan by Peter Thompson Architectural Design Consultant Ltd that shows the proposed location of the dwelling.

2.4 Tree Observations

All trees on the site, together with trees in neighbouring gardens were inspected, recorded in Table 1 below and plotted on Figure 1.

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*. See Appendix 5 for qualifications and experience of Ian Kennedy.

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 1. 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 considered suitable for retention due to major structural weaknesses, impacts of pests and diseases, severe decline or are dead.

One tree has been categorised 'B' due to its high landscape value whilst the remaining seven individual trees and one group of three have been categorised 'C' because of their impaired condition or low landscape value.

3.2 Root Protection Area (RPA)

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 Figure 2. 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. The RPA for Group 1 and Tree 8 has been offset to the south due to the sudden changes in levels at the point where they are growing.

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. Ultimately the trees must remain viable where retention has been agreed.

The proposed dwelling extends considerably into the RPA of Tree 7. However, this tree is one of the poorer trees on the site because of previous management practices to reduce its height.

Soil stripping which does not always constitute development in planning terms, particularly if being done for landscaping reasons, can also cause irreparable damage inside the RPA.

3.3 Conception and Design

The constraints imposed by trees should assist with site design and layout, together with the other competing needs of development. Generally trees in the higher categories (A and B) should be given greater consideration in any layout than the lowest retention category (C). Indeed, attempts to retain too many trees can create unreasonable pressures on the site and the retained trees.

As well as the footprint of buildings, the provisions of services and the access space required for construction itself should be considered. Whilst RPAs consider the constraints of the below ground parts of trees the above ground parts also need to be taken into consideration. These constraints may be in the future as trees grow, as well as the present.

For any trees that are to be retained careful pruning may be required prior to construction works to avoid damage to branches from higher sided vehicles delivering equipment and materials.

Additionally, future requirements of trees should be taken into account when considering their retention. This includes space to grow, shade cast on neighbouring properties, inconvenience from seasonal debris such as honey dew, fruit, seeds and leaves and the water demands on soils with shrinkable properties.

Because most of the trees are on the southern boundary of the site and at an elevated position they are likely to cast shade on any development. Furthermore, many of the trees are sycamore. This species drops honey dew, a sticky sap, during the summer months and is often considered an inconvenience.

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	Estim-ated life in years	Categ-ory	RPA (m^2) if retained
T1	Poplar	18.0	800#	North – 6.0# South – 4.0# East – 6.0# West – 6.0#	2.0 to NE	5.0	Mature	Normal	No significant defects were noted but inspection was limited due to limited access to the tree.	20+	B (2)	289.6
T2	Sycamore	14.0	540#	North – 4.0# South – 6.0# East – 3.0# West – 3.0#	3.0 to S	5.0	Early mature	Normal	The tree appears to be growing on neighbouring land and appears to have been pollarded at around 7m. The main stem is ivy covered into the crown.	20+	C (1)	91.6
T3	Laburnum	5.0	160	North – 2.0 South – 0.0 East – 0.0 West –2.0	3.0 to N	3.0	Early mature	Early decline	An insignificant tree that is heavily supressed by the surrounding trees and is consequently in decline. It is unlikely to develop further.	10	C (1)	11.6
T4	Sycamore	14.0	600#	North – 5.0# South – 3.0# East – 4.0# West – 5.0#	3.0 to E	3.5	Mature	Moder-ate vitality	The tree has been pollarded at approximately 7m in the past. There may be some decay at the cut points. No other significant defects were noted from the inspection point. However the tree is on neighbouring land.	20+	C (1)	162.9

T5	Sycamore	14.0	300#	North –2.5# South – 2.5# East – 2.5# West – 2.5#	3 to SW	3.5	Early mature	Moder-ate vitality	The tree appears to be growing on neighbouring land, is supressed by adjacent trees and is ivy covered to 5m.	10+	C (1)	40.7
T6	Sycamore	14.0	545	North – 6.0 South – 4.0# East – 2.0# West –6.4	3.5 to W	4.0	Early mature	Normal vitality	The main stem is ivy covered to 5m. There were no visible significant defects.	20+	C (2)	134.4
T7	Sycamore	12.0	750	North – 5.0# South –3.0# East – 2.5# West – 2.5#	4.0 to W	6.0	Mature	Normal vitality	The main stem divides into three at 2m. These are developing into acute stem unions but were stable at the time of inspection. The tree has been pollarded at 7m in the past. There are also several bark wounds with some evidence of decay.	20+	C (1)	254.5
T8	Sycamore	12.0	250#	North – 3.5# South – 3.5# East – 3.5# West – 3.5#	2.0 to N	2.0	Early mature	Normal vitality	The tree has been pollarded at 5 to 6m in the past. The main stem is ivy covered to 6m. Inspection was very limited due to difference in levels and the ivy,	20+	C (1)	28.3
G1	3 sycamore	12.0	250#	North – 6.0# South – 4.0# East –4.0# West –2.0#	0.5 to N	1.5	Early mature	Moder-ate vitality	The trees are growing at the top of a 3m high embankment. Ivy is established throughout the crowns. It was not possible to assess the condition of the trees for defects.	10+	C (1)	60.00

Please see appendix 4 for botanical names. # Estimated * Ground Level

4.2 Hedges and other vegetation

A 2 to 3m high Leyland cypress hedge is growing along part of the southern boundary of 23 Honeywell Lane. See Figure 1. The hedge is supressed to some degree by the surrounding trees and becoming open and gappy at the bottom. The hedge does however provide valuable screening for 23 Honeywell Lane.

4.3 Suitability of trees for retention as part of development

Tree 1 has been categorised 'B' because of the contribution it makes to the local landscape, albeit that the species is not particularly long lived relative to some other tree species.

All other trees have been categorised 'C', the lowest retention category, due to their impaired condition or the limited benefits they provide within the local landscape.

Trees 2, 4 and 7 have been categorised 'C' due to previous management practices. The trees have been pollarded at between 5 and 7m in the last ten years. Once this form of management takes place it is often necessary to continue this periodically for the life of the trees, otherwise the new growth from the pollard points can become detached as the weight of the limbs increases, particularly if decay is also present. Furthermore, it is only above the pollard points that these trees begin to become appreciably visible from the highway on Honeywell Lane above the existing dwellings. Therefore, Trees 2, 4 and 7 are unlikely to make a significant long-term contribution to the amenity of the area.

Trees 3 and 5 have been categorised 'C' because they are heavily supressed by neighbouring trees and are unlikely to become significant trees.

Tree 6 is the best formed tree having not been subject to unsympathetic management practices and is most likely to contribute to long-term amenity.

Tree 8 and trees in Group 1 and are unlikely to be affected by any site layout due to their elevated position above the site but, being to the south west of the site they may cast shade on any development as they grow.

4.4 Tree Protection Plan

Protective fencing will be necessary to protect all trees to be retained as part of the development. Fencing and other protective barriers should be erected before any works, including earth moving and vegetation clearance begins on site. Fencing, once in place should be maintained in position throughout and should be of a standard that cannot be easily moved, damaged or knocked over during the course of development. The standard specified in Figures 2 and 3 of BS5837:2012 should be followed, or a suitably robust alternative. (See appendix 2)

4.5 New Planting

Opportunities to plant new trees will be limited, partly due to the confined nature of the site but also because of the existing tree cover in the eastern part of the site. The canopy cover of these trees would make it difficult to young trees to establish because of the shade being cast.

5.0 Conclusions

- Only one of 11 trees has been categorised 'B', the others are considered category 'C' due to their impaired condition of limited amenity value.
- A number of the trees appear to be growing out with the boundary of the site.
- The trees have little arboricultural merit individually but as a group provide some amenity in an otherwise treeless part of the street.
- Many of the trees are either supressed or have been subject to intrusive management practices in the past.
- Only one tree (Tree 7) is affected by the proposed location of the dwelling.
- The other ten trees can be retained without incursion into their root protection areas.
- On balance, retention of ten of the 11 trees will ensure that the amenity provided by trees at this site is protected.

6.0 Legal Considerations

6.1 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 obtain consent from the local planning authority (LPA) before any work, other than certain exempted operations, can be carried out.

6.2 Wildlife conservation legislation

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

The site may be used by breeding birds and possibly bats.

In general many of the trees are not particularly valuable individually for bat roosts because of their relatively small size and lack of holes and cavities. However, the dense ivy cover on some stems may be attractive for roosting, particularly summer roosts.

The stone outbuilding may also be desirable to roosting bats.

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.

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

Appendix 1. 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 2. Protective Fencing

on retained hard surfacing or it is otherwise unfeasible to use ground pins, e.g. due to the presence of underground services, the stabilizer struts should be mounted on a block tray (Figure 3b).

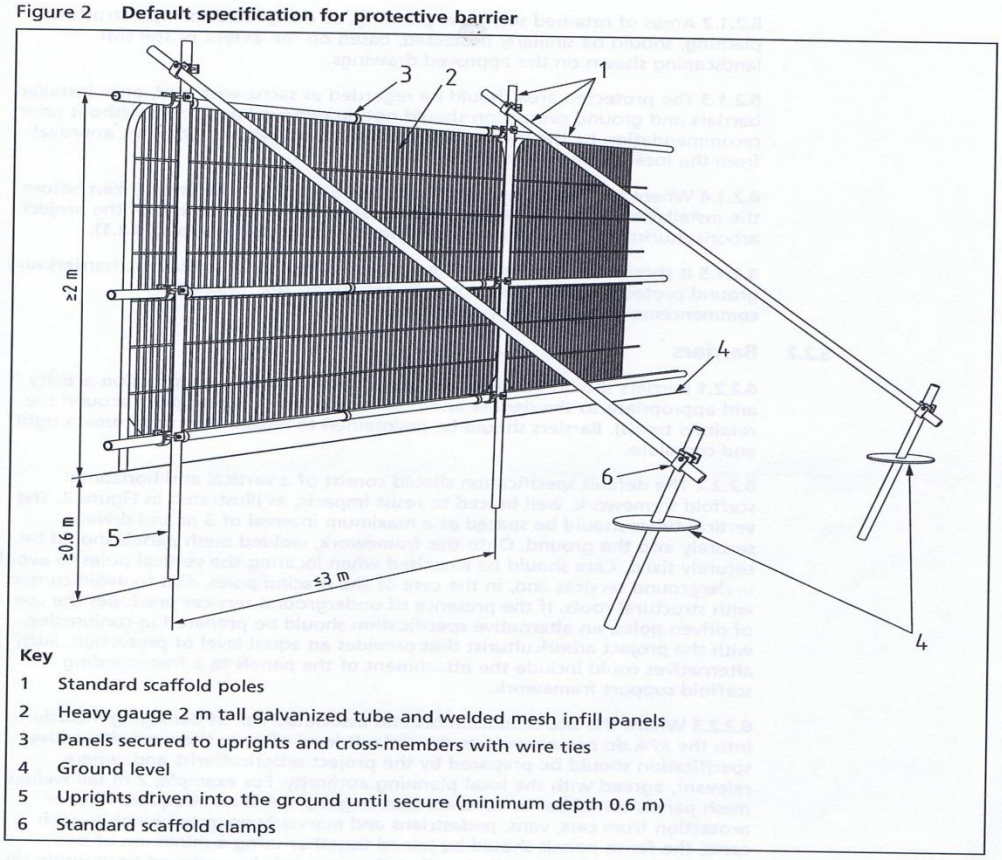
NOTE 1 Examples of configurations for steel mesh perimeter fencing systems are given in BS 1722-18.

NOTE 2 It might be feasible on some sites to use temporary site office buildings as components of the tree protection barriers, provided these can be installed and removed without damaging the retained trees or their rooting environment.

6.2.2.4 All-weather notices should be attached to the barrier with words such as:

"CONSTRUCTION EXCLUSION ZONE – NO ACCESS".

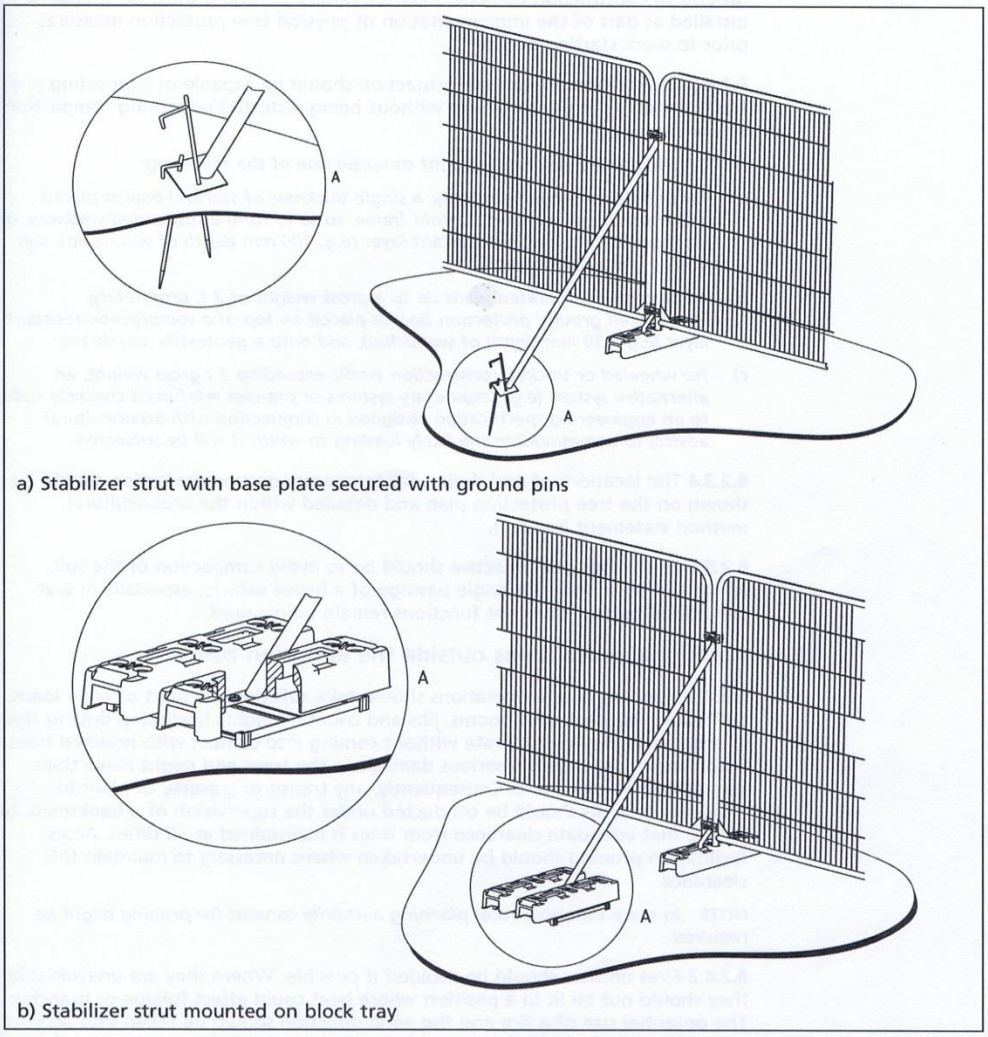
Figure 2 **Default specification for protective barrier**



Key

1 Standard scaffold poles
2 Heavy gauge 2 m tall galvanized tube and welded mesh infill panels
3 Panels secured to uprights and cross-members with wire ties
4 Ground level
5 Uprights driven into the ground until secure (minimum depth 0.6 m)
6 Standard scaffold clamps

Figure 3 **Examples of above-ground stabilizing systems**



a) Stabilizer strut with base plate secured with ground pins

b) Stabilizer strut mounted on block tray

6.2.3 Ground protection during demolition and construction

6.2.3.1 Where construction working space or temporary construction access is justified within the RPA, this should be facilitated by a set-back in the alignment of the tree protection barrier. In such areas, suitable existing hard surfacing that is not proposed for re-use as part of the finished design should be retained to act as temporary ground protection during construction, rather than being removed during demolition. The suitability of such surfacing for this purpose should be evaluated by the project arboriculturist and an engineer as appropriate.

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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.

Appendix 4. Botanical names of trees on site.

Laburnum – *Laburnum* sp

Poplar – *Poplus* sp

Sycamore – *Acer pseudoplatanus*

Appendix 5 – Qualifications and experience of Ian Kennedy

1. Qualifications

Ian graduated from the Scottish Agricultural College September 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 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 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.

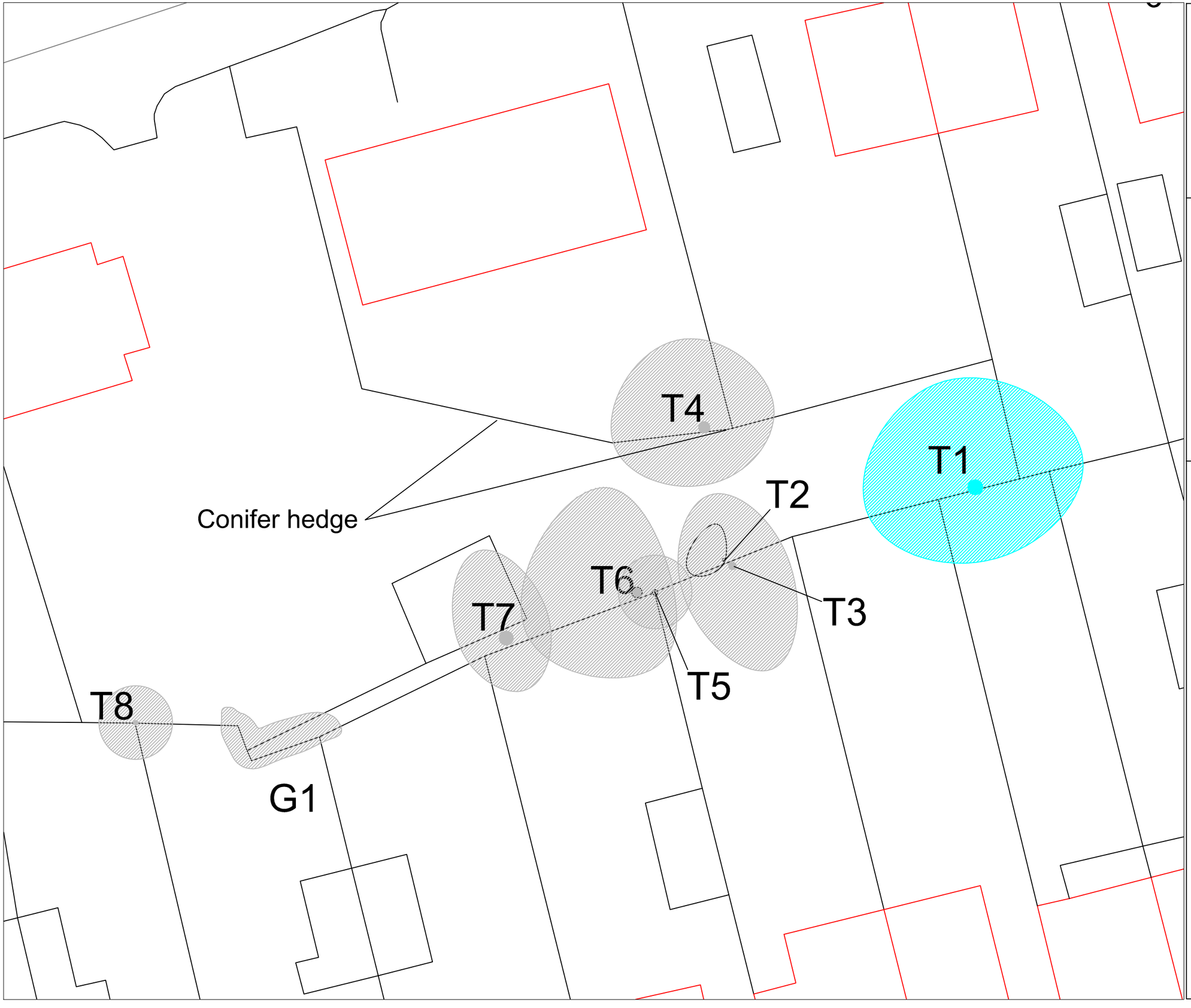
Ian has worked extensively with Forestry Commission to obtain the necessary licences for management works and ensured the estate benefited fully from the full range of grants available.

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, 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.

Figure 1
Tree Categories



Key

- Category 'B' tree
- Category 'C' tree

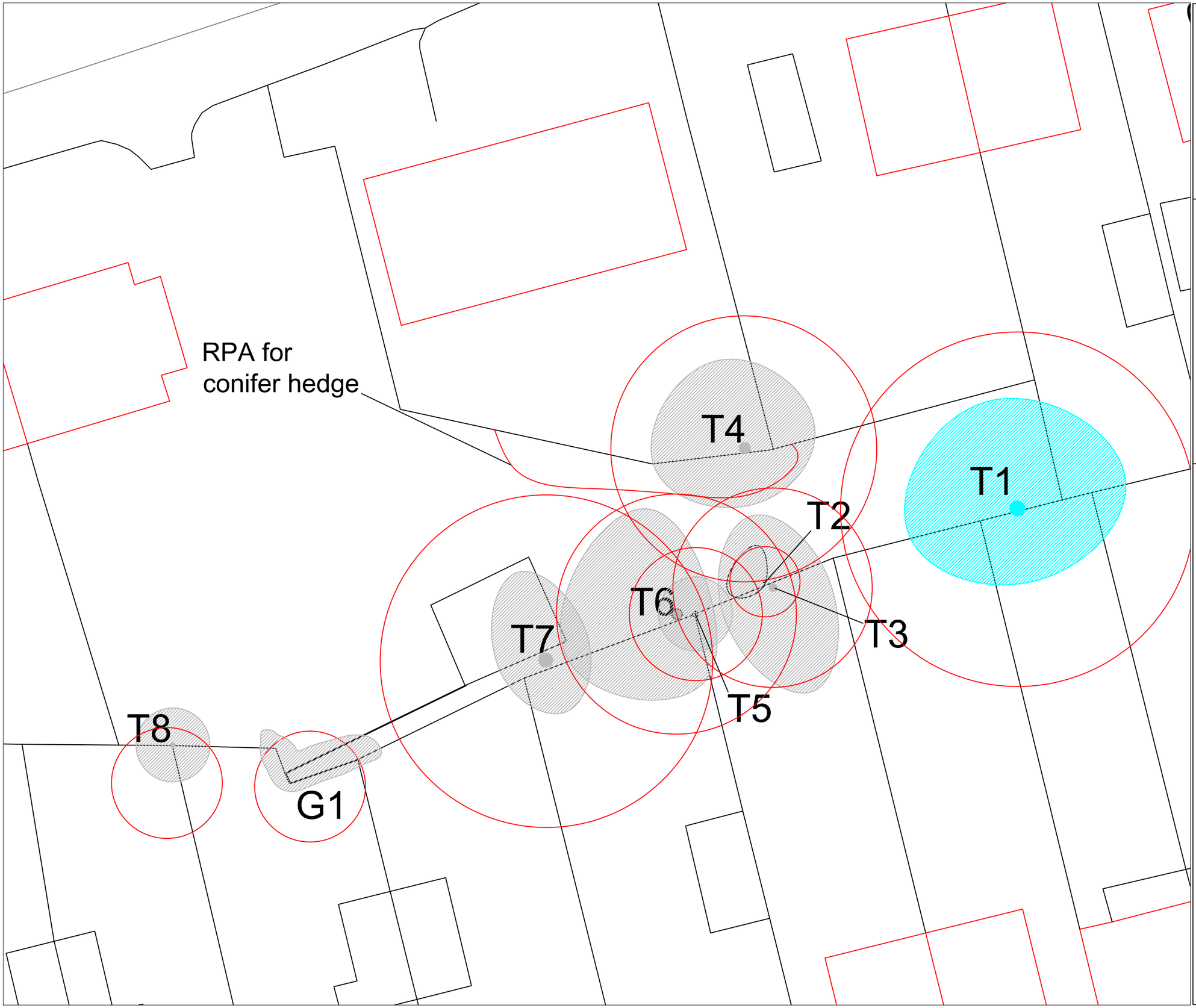
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WHARNCLIFFE
TREES AND WOODLAND CONSULTANCY

16 Hartcliffe View
Thurgoland
Sheffield
S35 7BD
0114 288 5501
07891488303
info@wharncliffetwc.co.uk

Figure 2
Root Protection Area Plan



Key

Root Protection Areas (RPAs)

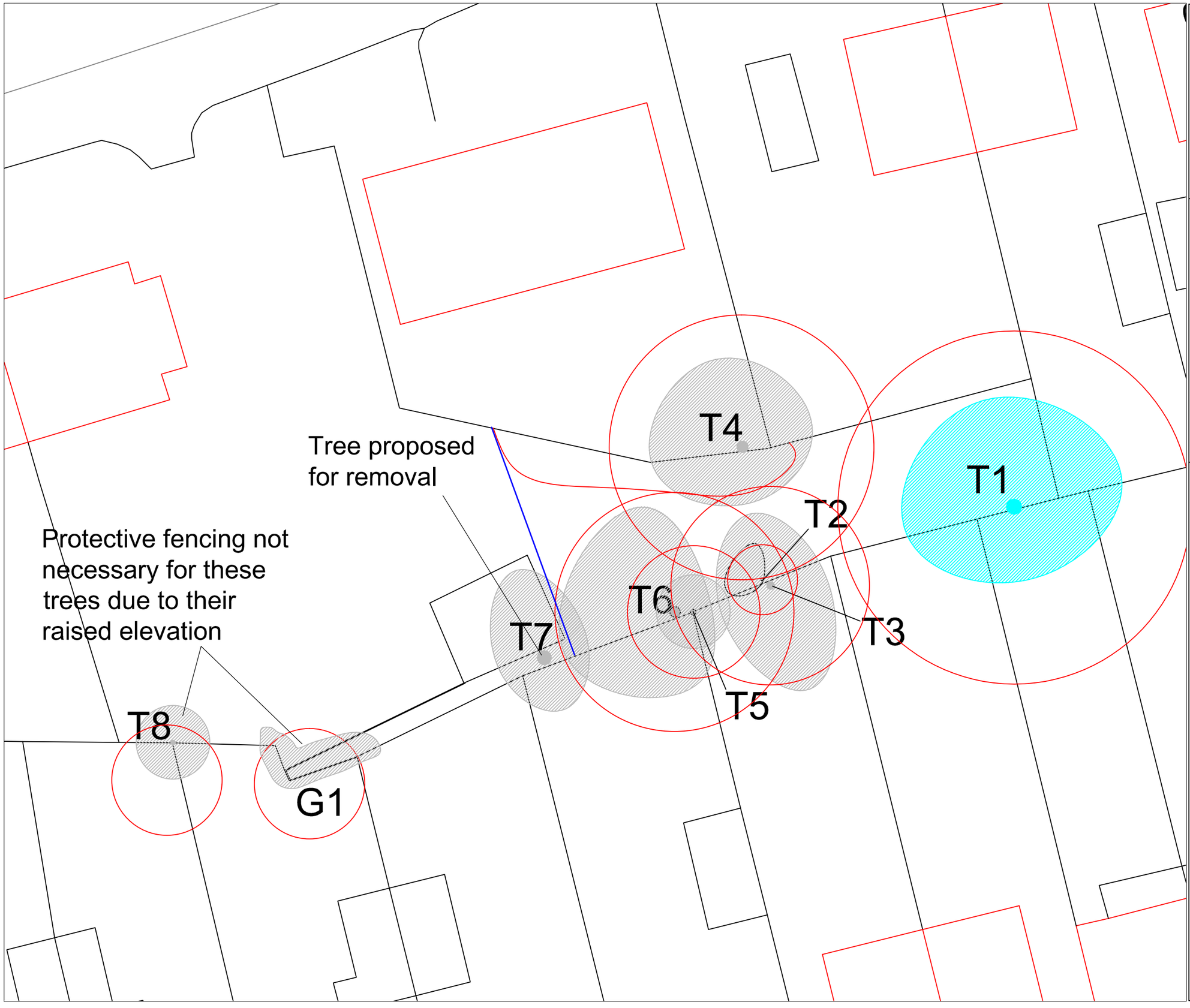
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Date: 11 02 2014

WHARNCLIFFE
TREES AND WOODLAND CONSULTANCY

16 Hartcliffe View
Thurgoland
Sheffield
S35 7BD
0114 288 5501
07891488303
info@wharncliffetwc.co.uk

Figure 3
Tree Protection Plan



Key

Line of protective fencing

Scale: 1:200 @ A3

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16 Hartcliffe View
Thurgoland
Sheffield
S35 7BD
0114 288 5501
07891488303
info@wharncliffetwc.co.uk