

**Edmund Road
Worsborough**

Pre-development Arboricultural Report

**Prepared at the request of
Tankersley Developments Ltd**

04 September 2020

**By
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Summary

I have been instructed to carry out a pre-development tree survey of the significant trees on land immediately to the east of Edmund Road and north of the Trans Pennine Trail, Worsborough in close proximity to two proposed detached dwellings.

The approximate locations of the trees are recorded on Plan 1 that shows the existing site layout.

Table 1 records their species, dimensions, age, life expectancy, any defects and their amenity value. This information was collected, interpreted and recorded in accordance with BS5837:2012 *Trees in relation to design, demolition and construction – Recommendations*. The information is used to attribute retention categories to the trees; A, B, C and U. These retention categories are described in Appendix 2.

There are five trees included in this report. All are included in the lowest retention category 'C' (shown grey on plan 1) because they are relatively small and in the case of a number of trees have limited future prospects.

Most of the trees included in this report are on land to the south of the application site that forms part of the Trans Pennine Trail.

Plan 2 shows proposed layout with the crown spreads and root protection areas (RPAs) plotted.

Section 4 of the report is the impact assessment that discusses the impact of the proposed layout on the trees. The proposals would have a very limited impact on trees in the area.

Plan 3 is the tree protection plan that shows how trees should be protected if they are to be retained as part of development.

CONTENTS

1	INTRODUCTION	6
1.1	Instruction	6
1.2	Documents and Provided Information	6
1.3	Limitations	6
2	SITE VISIT AND OBSERVATIONS	7
2.1	Site visit	7
2.2	Brief Site description	7
2.3	Development Proposals	7
2.4	Locations of the Trees	7
2.5	Tree observations	8
3	Interpretation of Information and References	10
3.1	BS5837:2012 Tree Retention Categories	10
3.2	Below Ground Constraints; Root Protection Areas (RPAs)	10
3.3	Above Ground Constraints; Crown Spreads.....	11
3.4	Conception and Design.....	11
4	ARBORICULTURAL IMPACT ASSESSMENT.....	12
4.1	Arboricultural Impact Assessment	12
4.2	Levels	13
4.3	Ground surface materials	13
4.4	Site access.....	13
4.5	Storing fuel, materials and equipment.....	13
4.6	Activity under tree canopies	14
5	ARBORICULTURAL METHOD STATEMENT	15
5.1	Specific Tree Protection Measures	15
5.2	General Tree Protection Measures	15
6	REFERENCES, PLANNING POLICY AND GUIDANCE.....	16
6.1	National policy	16
6.2	British Standard: Trees in relation to design, demolition and construction – Recommendations (BS 5837, 2012)	17
6.3	Barnsley Metropolitan Borough Council	17
7	CONCLUSIONS.....	18
8	LEGAL CONSIDERATIONS	19
8.1	Protected trees.....	19
8.2	Wildlife conservation legislation	19

TABLES

Table 1	The Tree Survey.....	8
Table 2	Summary of the impacts of the proposals on the trees.....	13

PLANS

Plan 1	Tree constraints plan of the existing site layout	20
Plan 2	Tree constraints plan of the proposed site layout	21
Plan 3	Tree protection plan of the existing site layout	22

APPENDICES

Appendix 1	The Experience and Qualifications of Ian Kennedy	23
Appendix 2	Tree Retention Categories.....	25
Appendix 3	Explanatory notes for some of the terms used in this report	23
Appendix 4	Suggested tree protection taken from BS5837:2012	28
Appendix 5	Example of a sign to attach to tree protective fencing	30

1 INTRODUCTION

1.1 Instruction

I have been instructed by Tankersley Developments Ltd to carry out a pre-development tree survey of the significant trees growing on land to the east of Edmund Road and north of the Trans Pennine Trail, Worsborough that are in close proximity to two proposed detached dwellings.

The tree survey is intended to provide a structured, impartial assessment of the tree population that could be affected by a proposed 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 Provided Information

I was provided with the following documents:

Site plan of the proposed layout at scale 1:500

Site plan of the proposed layout at scale 1:1250

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.

This report has been prepared for pre-development purposes. Whilst the condition of the trees has been assessed this is primarily to attribute a retention category. It is not a tree condition and safety report and may not include the same level of detail on tree health and structural condition.

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 SITE VISIT AND OBSERVATIONS

2.1 Site visit

I visited the site on 31 August 2020 to complete the survey.

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

The principles of BS5837:2012 were applied to the assessment and evaluation of the trees.

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

2.2 Brief Site description

The application site is a vacant area of land immediately to the east of Edmund Road and north of the Trans Pennine Trail in Worsborough at Ordinance Survey grid reference SE 3614 0359. There are no buildings or significant vegetation on the site. There are a number of trees growing on land to the south that forms part of the Trans Pennine Trail.

There are new dwellings to the east of the site.

2.3 Development Proposals

The development proposes two detached dwellings towards the northern boundary of the site with associated parking and garden areas.

2.4 Locations of the Trees

The positions of the trees were plotted by me using fixed known points such as the corners of the neighbouring property. I am not a land surveyor and if more accuracy about the positions of the trees is necessary then the services of a land surveyor should be used to plot them.

2.5 Tree observations

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	Health	General observations on the tree's condition	Estimated life in years	Amenity value	Category
T1	Hawthorn	9.0	300	North – 3.0 South – 2.0 East – 2.0 West – 2.0	3.0	2.0	Mature	Normal	A healthy tree growing close to the boundary of the site. There appear to be no significant defects but the tree is heavily ivy covered.	10+	Medium	C (1)
T2	Norway maple	15.0	160, 260, 270	North – 3.3 South – 3.0 East – 3.0 West – 2.0	3.0	3.0	Juvenile mature	Normal	A healthy, multi-stemmed tree growing close to the boundary of the site with no significant defects.	10+	Medium	C (1)
T3	Norway maple	15.0	150, 200, 200	North – 5.5 South – 3.0 East – 1.0 West – 5.5	3.0	3.0	Juvenile mature	Normal	A healthy, multi-stemmed tree growing close to the boundary of the site with no significant defects.	10+	Medium	C (1)
T4	Goat willow	9.0	120, 150, 200, 220, 250, 270, 300	North – 7.5 South – 4.0 East – 5.0 West – 7.0	2.1	1.0	Old mature	Normal	A wide crowned, multi-stemmed tree. There is some decay at the base of some of the stems. The stems appear stable at present but as decay progresses it will possibly contribute to their collapse in time.	10+	Medium	C (1)

T5	Cherry	8.0	110, 150, 170	North – 3.0 South – 3.0 East – 2.0 West – 3.0	2.0	2.0	Juvenile mature	Normal	A young tree growing on top of the existing stone wall.	10+	Low	C (1)
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3 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*.

3.1 BS5837:2012 Tree Retention Categories

All trees have been assessed and assigned a retention category in accordance with Table 1 of the standard. A copy of Table 1 from BS5837: 2012 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 A and B trees tend to be considered more valuable for retention than category C trees.

Category 'U' trees are those not suitable for retention because of impaired condition.

Hedges and shrubs are not assigned retention categories but their heights and species are simply noted on the tree constraints plan.

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. 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 will be out with the crown spreads of trees to be retained.

Any permanent development proposed within the canopy spread of a tree should be assessed to determine whether the level of pruning necessary to accommodate the layout would be acceptable. 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.

Where temporary 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.

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.

The provisions of services and the access space required for construction itself should be considered.

4 ARBORICULTURAL IMPACT ASSESSMENT

This section of the report considers the impact that the proposed layout could have on the trees that are included in Table 1 and shown on Plan 1; *Tree Constraints Plan showing the existing layout*.

This section discusses the engineering solutions that may be available to retain trees where development is proposed within their root protection areas (RPAs) or the pruning options available where development might affect crown spreads.

Where there is no option but to remove a tree to accommodate the proposed layout this section will discuss the impact on amenity and ecology and any mitigation that could be offered such as opportunities for replacement planting.

4.1 Arboricultural Impact Assessment

Trees 1, 2 and 3

There would be no impact on these trees from the proposed development. Their crowns would however overhang the bottoms of the gardens. The crowns are comprised of a network of long, small diameter branches. These branches could be readily pruned back to suitable growing points without detriment to the health or amenity of the trees. Their crowns are weight biased to the north in any case because they are growing towards the light.

Tree 4

The northern extremity of this tree's crown and RPA extends into the area proposed for parking spaces for one of the plots. The extent of the RPA affected is very small at less than 5% of the total area. The tree will tolerate this without any difficulties.

Some pruning to the northern part of the canopy will also be necessary. The branches in the northern part of the crown are long and small in diameter. They could be shortened by around 3m back to suitable growing points without detriment to the health or amenity of the tree.

If this development is completed then I recommend that this tree is inspected every two years and after strong winds and heavy snow to ensure that the stems remain stable.

Tree 5

This tree would be unaffected by the proposals but it is growing on top of the dilapidated boundary wall. If this wall is to be restored in any way this tree will need to be removed. It is a small, insignificant tree.

Table 2 Summary of the impacts of the proposals on the trees

Impact on trees	Category A trees	Category B trees	Category C trees	Category U trees
Unaffected	No category A trees.	No category B trees.	T1, T2, T3, T5	No category U trees.
Buildings within RPAs			-	
Buildings within crown spreads			-	
Roads, drives or parking within RPAs			T4	
Roads, drives or parking under crown spreads			T4	

4.2 Levels

Altering the ground level within the RPAs of the trees may have a detrimental impact on their health and longevity.

4.3 Ground surface materials

Altering the ground cover, such as by using impervious or semi-pervious surface materials to cover areas that were previously vegetated soil, will alter the moisture content and recharge of the soil and its oxygen and carbon dioxide content. This could have a detrimental effect on the health of tree roots growing in it.

4.4 Site access

Vehicles and plant operating or parking on unprotected soil within the RPA of a retained tree could compact or contaminate it and this could have a detrimental impact on its long-term condition and longevity.

4.5 Storing fuel, materials and equipment

Storing fuel, equipment and materials close to trees increases the risk of damage to their trunks and branches, soil compaction and/or contamination with toxic substances.

4.6 Activity under tree canopies

Activity under tree canopies, such as mixing cement, lighting bonfires or storing equipment, plant and materials, may damage branches or stems. It may also be detrimental to soil within its RPA that is utilised by its roots.

5 ARBORICULTURAL METHOD STATEMENT

It is important that a method statement appropriate to the scale of development around retained trees is prepared, particularly where development or access is necessary within the RPAs and crown spreads of retained trees. This should address any eventuality that may involve working within the RPAs or crown spreads of existing trees. This will include temporary workings during construction as well as permanent incursion for surfacing.

5.1 Specific Tree Protection Measures

If the layout is implemented in its current form and the trees are to be retained I recommend that tree protective fencing is erected at the positions shown on Plan 3 to the standard specified in the British Standard as shown in Appendix 4. I also recommend that the crowns of Trees 2, 3 and 4 are reduced by up to 3m on their northern sides.

5.2 General Tree Protection Measures

To avoid damage to retained trees where no construction or access within RPAs and crown spreads is necessary the following general precautions should be followed during the construction phase.

- No dumping or storing materials or waste, whether in a skip or on the ground.
- No temporary buildings, sheds, or offices without prior discussion with an arboriculturalist and agreement of the LPA.
- No storage of materials, equipment, plant, fuel or cement.
- No bonfires within 10m of the outer edge of the crown or RPA.
- No refuelling mechanical equipment or mixing of cement.
- No washing cement mixers within or uphill of the RPA.
- No vehicles and plant unless the soil is suitably protected as recommended an arboriculturalist and agreed by the LPA.
- No raising the soil level without prior discussion with an arboriculturalist and agreement of the Local Planning Authority (LPA).
- No excavations without prior discussion with an arboriculturalist and agreement of the LPA.
- No redirection of surface water runoff into or out of the RPA.
- Follow the guidance contained within the National Joint Utilities Group Volume 4 (Guidelines for the Planning, Installation and Maintenance of Utility Apparatus in Proximity to Trees (Issue 2, 2007); www.njug.org.uk) when installing underground services within the RPA of a retained tree.

Page 15/30

6 REFERENCES, PLANNING POLICY AND GUIDANCE

6.1 National policy

Section 197 in the Town and Country Planning Act 1990 makes it the duty of Local Planning Authorities (LPAs), *'in the interests of amenity,'* to protect trees, when granting planning permission, either by the imposition of conditions or serving Tree Preservation Orders (TPOs).

The National Planning Policy Framework (NPPF) mentions trees and should be taken into account.

170. Planning policies and decisions should contribute to and enhance the natural and local environment by:

b) recognising the intrinsic character and beauty of the countryside, and the wider benefits from natural capital and ecosystem services – including the economic and other benefits of the best and most versatile agricultural land, and of trees and woodland;

175. When determining planning applications, local planning authorities should apply the following principles:

c) development resulting in the loss or deterioration of irreplaceable habitats (such as ancient woodland and ancient or veteran trees) should be refused, unless there are wholly exceptional reasons⁵⁸ and a suitable compensation strategy exists;

Annex 2: Glossary

Ancient or veteran tree: A tree which, because of its age, size and condition, is of exceptional biodiversity, cultural or heritage value. All ancient trees are veteran trees. Not all veteran trees are old enough to be ancient, but are old relative to other trees of the same species. Very few trees of any species reach the ancient life-stage.

Ancient woodland: An area that has been wooded continuously since at least 1600 AD. It includes ancient semi-natural woodland and plantations on ancient woodland sites (PAWS).

Irreplaceable habitat: Habitats which would be technically very difficult (or take a very significant time) to restore, recreate or replace once destroyed, taking into account their age, uniqueness, species diversity or rarity. They include ancient woodland, ancient and veteran trees, blanket bog, limestone pavement, sand dunes, salt marsh and lowland fen.

6.2 British Standard: Trees in relation to design, demolition and construction – Recommendations (BS 5837, 2012)

The British Standard: *Trees in relation to design, demolition and construction – Recommendations* (BS 5837, 2012) contains guidance on how to assess trees in or close to proposed development and information to include in pre-development arboricultural reports submitted with planning applications. Appendices 2 and 3 contain relevant extracts from BS 5837 (2012).

6.3 Barnsley Metropolitan Borough Council

Barnsley Local Plan. Adopted January 2019

17. Green Infrastructure and Green Space

7 CONCLUSIONS

There are five individual trees included in this report.

All are included in the lowest retention category (C) because they are relatively small and only moderately significant trees

Trees 1, 2, and 3 would be unaffected by the proposals but some pruning of their northern crowns would reduce overhang into the gardens of the properties.

The proposed parking spaces would encroach slightly into the northern part of the RPA and crown spread of Tree 4. This would not be detrimental to the tree's roots because only a very small part of the RPA would be affected. Pruning could be carried out to the northern part of the crown to reduce it by approximately 3m without detriment to its health or amenity.

Tree 5 would need to be removed to restore the boundary wall

The proposals would have a very limited impact on trees in the area.

8 LEGAL CONSIDERATIONS

8.1 Protected trees

No checks have been made with the Local Planning Authority (LPA) for trees included in a Tree Preservation Order (TPO) or within a Conservation Area.

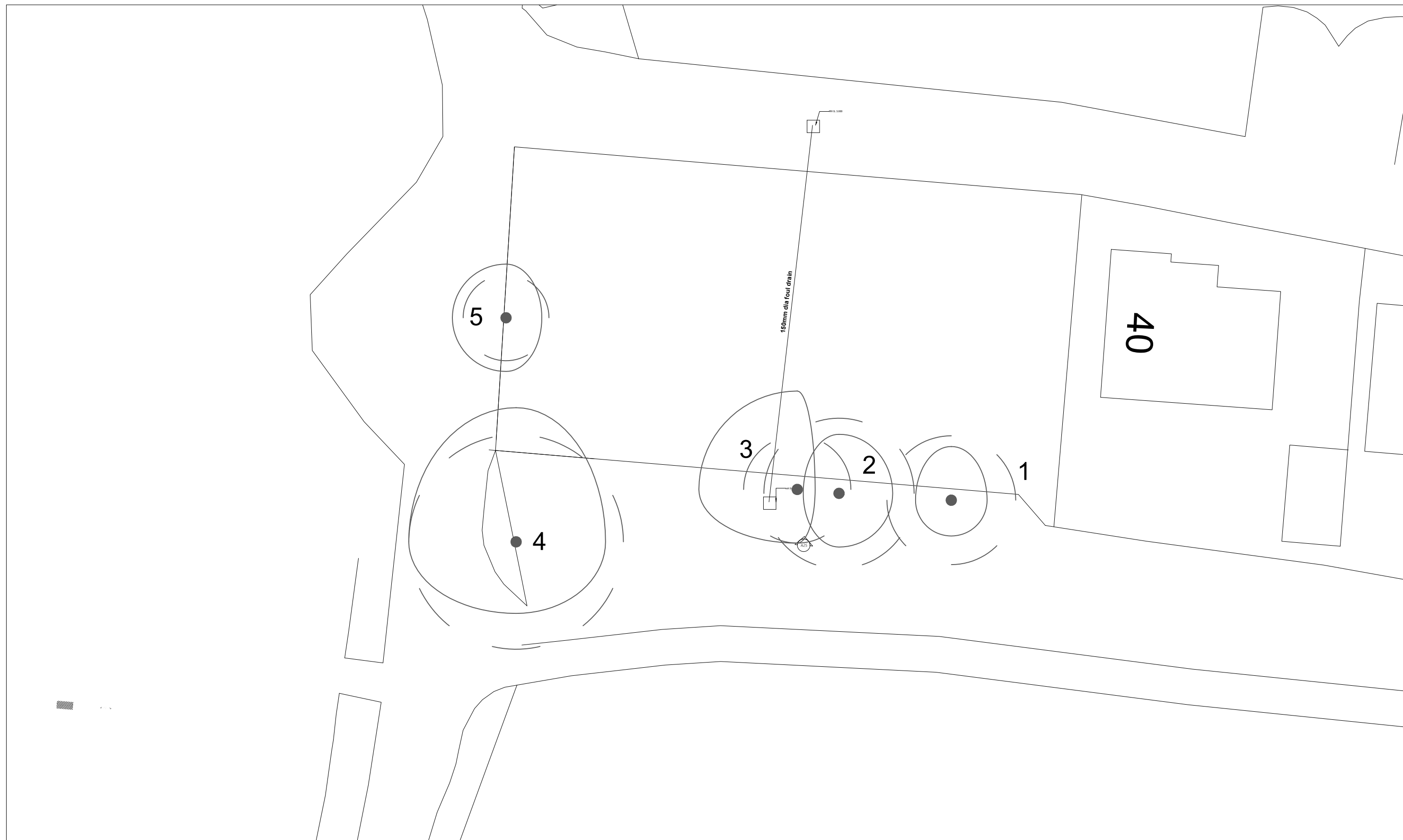
If any trees are protected by a TPO, are located in a conservation area or protected by planning conditions, it will be necessary to obtain permission from the LPA before any work, other than certain exempted operations, can be carried.

8.2 Wildlife conservation legislation

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

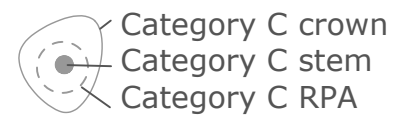
Consideration should be given to the presence of protected species prior to any proposed tree removal or maintenance. This will include breeding birds, principally between March and August, and bats at any time of year.

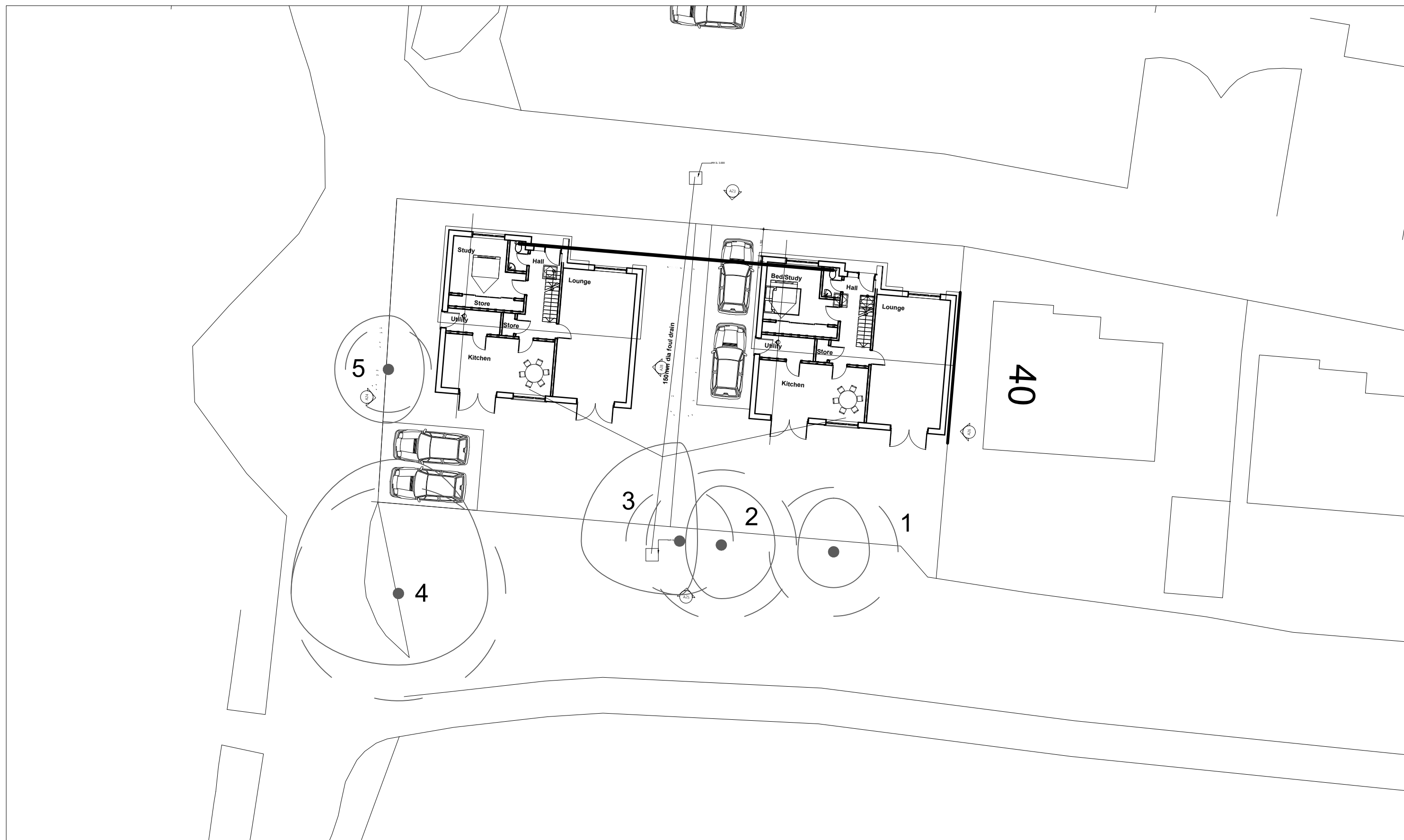
Tree surgeons should also be aware of their duties under legislation to protect wildlife and carry out their site assessment and work accordingly.



Plan 1 Tree Constraints Plan showing the existing layout

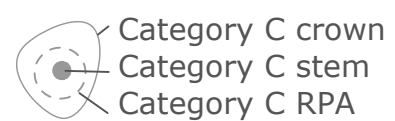
Scale 1: 200 @ A3

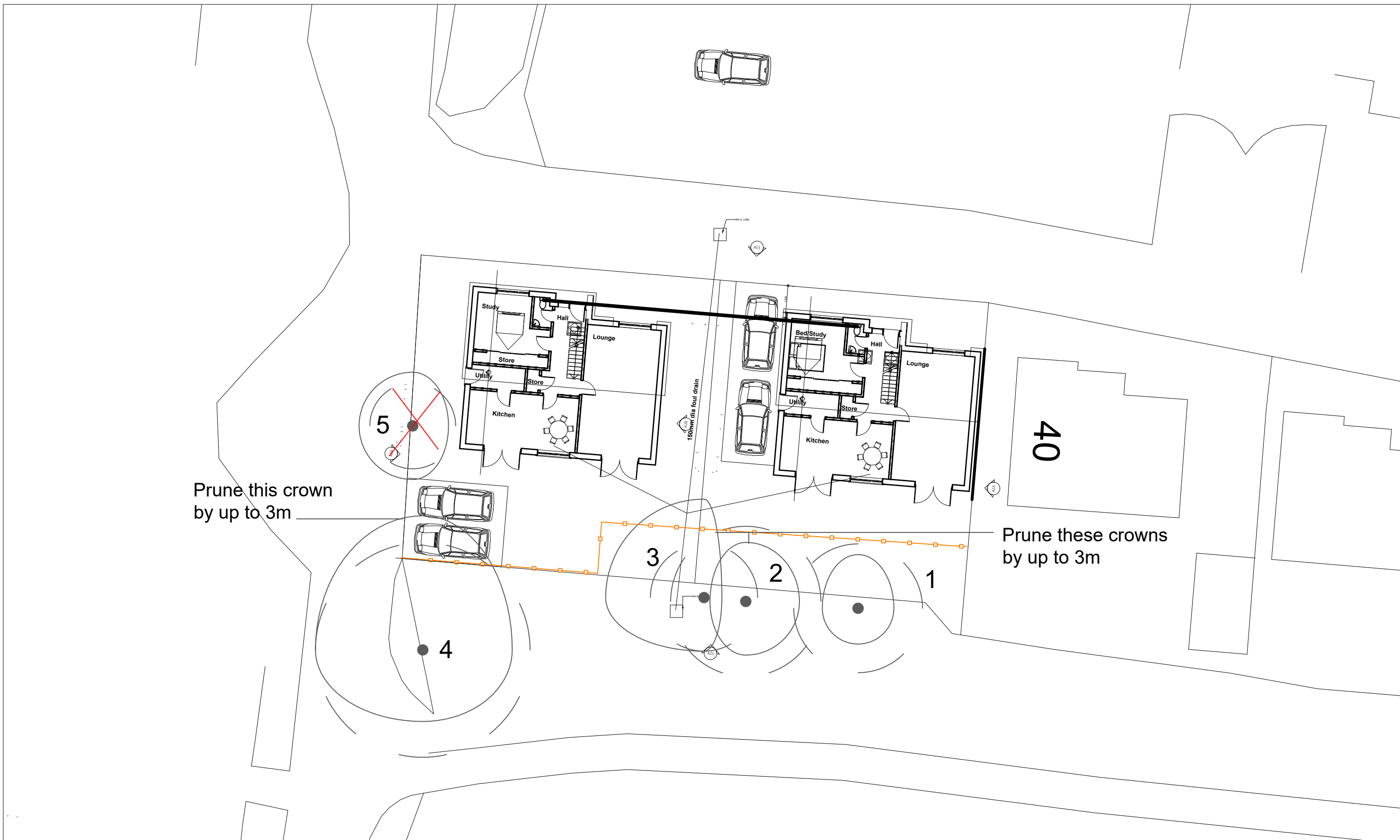




Plan 2 Tree Constraints Plan showing the proposed layout

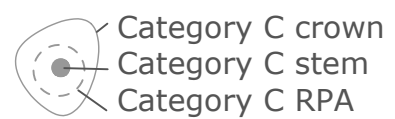
Scale 1: 200 @ A3



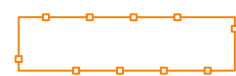


Plan 3 Tree Protection Plan showing the proposed layout

Scale 1: 200 @ A3



Category C crown
Category C stem
Category C RPA



Tree protective
fencing



Tree recommended
for removal



NORTH

Appendix 1

The Experience and Qualifications 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.

Appendix2

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 <i>NOTE Category U trees can have existing or potential conservation value which it might be desirable to preserve; see 4.5.7.</i>			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 some of the terms used in this report

- **Stem Diameter:** The diameter of the trunk at 1.5m above ground level and recorded in millimetres measured with a diameter tape.
- **Compass Bearing:** N = north; S = south; E = east; W = west;
- **Life Stage:** Assessed as either:
 - Semi-mature = a size which could be easily transplanted;
 - Juvenile 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;
 - Veteran = Beyond maturity for the species. This can be characterised by larger than average stem diameters, scaffold branches or crown spreads. Often still growing with full crowns.
 - Ancient = Well beyond normal mature age. It will have special characteristics associated with its age, including biological, cultural. Growth rates will significantly reduced and the tree may be declining in size.
- **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.

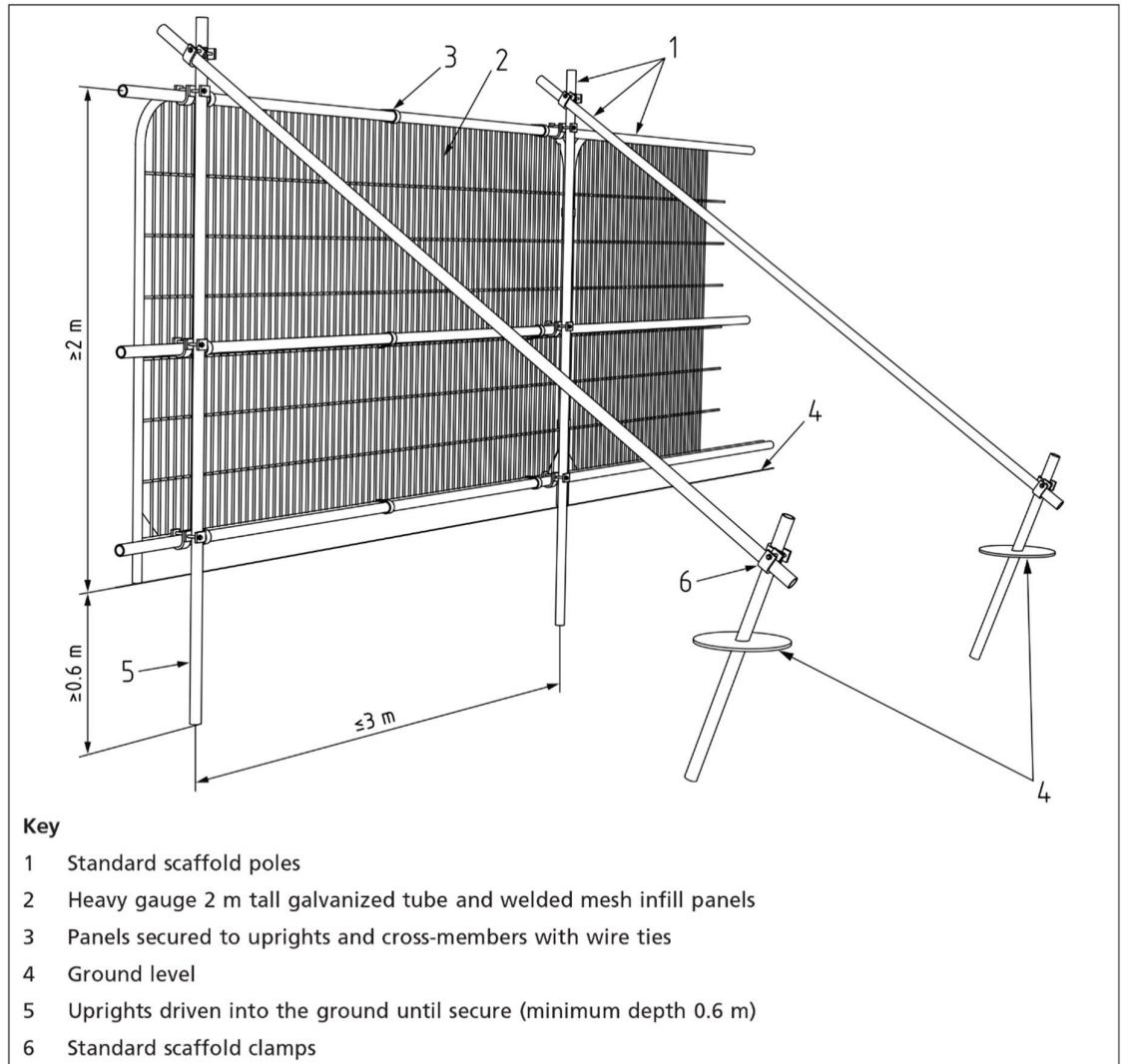
- Acute branch union = the same principle as acute stem unions but between a stem and a branch or two branches rather than 2 main stems.

- **Estimated life**
 - The life expectancy brackets of <10 years, 10+ years, 20+ years and 40+ years accord with the guidance in BS5837:2012 and should be considered as the useful life expectancy in the location the trees are growing in. For example, a tree with significant defects growing in a quiet area could be retained for longer than a tree growing next to a busy highway or a residential building.

- **Amenity**
 - High = Growing in a place that is very publicly visible such as a next to a busy road or places where people gather. The tree is also likely to be large or very large.
 - Medium = A smaller tree growing in a very publicly visible place or a large tree growing in a place with reduced public access.
 - Low = A small to medium sized tree growing in a quiet location where it is barely or not visible to anyone other than the landowner.

Appendix 4

Suggested Tree Protection Fencing taken from BS5837:2012

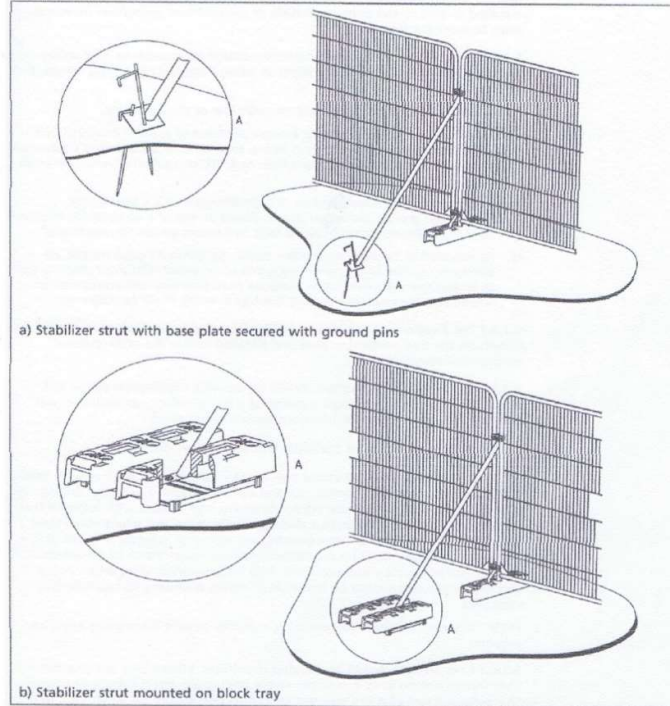


Braced Heras fencings can be used as an alternative to a scaffold frame

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BS 5837:2012

Figure 3 Examples of above-ground stabilizing systems



Appendix 5

Example of a sign to attach to tree protective fencing



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