



# **Braemar Arboriculture Limited**

## **Tree Report – BS5837:2012 Arboricultural Impact Assessment & Method Statement**


Relating to:

Land off Berry Lane  
Bradley  
Alresford  
SO24 9RY

### **Tree Management Consultants**

Report Ref: BALDS027-19  
Date of issue: 30<sup>th</sup> October 2019

## Document Control

Client:	Mr D Alden
Report Title:	Tree Report – BS5837:2012 Arboricultural Impact Assessment & Method Statement
Report Reference:	BALDS027-19
Report Status:	Final
Prepared by:	Richard Allen
Signed:	
Date of Issue:	30 <sup>th</sup> October 2019

## Distribution

Mr D Alden  
Developer

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## **Validation Statement for Local Planning Authority Registration**

This report contains information regarding trees which relate to proposed development.

For Local Planning Authority (LPA) validation purposes this report contains the following information:

Arboricultural Assessment – Tree Survey. The survey of trees within the curtilage of and immediate proximity to the site is compliant with the requirements of British Standard BS 5837 (2012) Trees in Relation to design, demolition and construction – Recommendations.

Arboricultural Impact Assessment – This is an appraisal of the development and how it impacts upon those trees to be retained along with protective measures.

Arboricultural Method Statement – Sets out the information regarding the measures to be taken to protect trees shown to be retained on the submitted drawings. It also details the methodology for the implementation of any aspect of the proposal that has the potential to result in the loss or damage to a tree.

Tree Survey Plan – This will detail the position of all trees identified within the report.

Tree Constraints Plan – This will identify all trees surveyed and the shade cast as well as the root protection area for each tree.

Tree Protection Plan – A tree protection plan detailing trees to be retained, trees to be removed, protective measures, fencing and ground protection. The suggested position for a site compound where welfare unit and material storage along with mixing of concrete and cement will take place.

Tree Removals & Works Plan – A plan detailing those trees which are to be removed under permission of the development and any required pruning works associated with the development.

## Summary

The purpose of this report is to provide an assessment of the arboricultural impacts of development in accordance with BS5837:2012 "Trees in relation to design, demolition and construction – Recommendations". All trees within the curtilage of the site and those externally to the site deemed to be within influencing distance of the project have been included in the assessment.

In this circumstance it is intended to construct a single residential dwelling within the curtilage of the plot.

**Implications on Construction** – There are no new foundations for the proposed dwelling within the Root Protection Area of retained trees. New hard surfaces will not require specialist design. Protective fencing must be installed prior to commencement of construction and retained for the duration of the development.

**Implications to retained trees** - Two trees have been identified for removal, one as a result of poor condition and one to facilitate the development access. Mitigation measures have been put forward to ensure no net loss of trees as a result of development. Two trees have been identified as requiring pruning works to facilitate development, these works are minor and are not expected to be detrimental to retained trees.

**Post Development Implications** – The design of the development, together with the orientation of the site is such that matters involving retained trees (e.g. privacy, screening, direct damage, future pressure for removal) are not considered to be significant issues. The design has minimised the potential for impacts of shading from retained trees, with all the principle living areas, and associated fenestration being biased away from retained trees, therefore maximizing the benefits of the potential probable sunlight.

The **developer** has considered the constraints of retained trees and has put forth a design layout that integrates retained trees and built form without conflict.



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# 1 INTRODUCTION

1.1 I am instructed by Mr D Alden, to inspect the relevant trees at land off Berry Lane, Bradley, and to provide an arboricultural report in accordance with the methodologies described in BS5837:2012, to determine the impacts of building development.

## 1.2 Qualifications & experience

The author of this report (Richard Allen) holds a level 4 qualification in arboriculture and is professional tree inspection qualified. He holds professional membership of the Arboricultural Association (AA), and the Consulting Arborist Society (CAS).

## 1.3 Documents & information provided

I was provided with the following information.

Letter of instruction  
Site plans DWG / PDF

## 1.4 Relevant background information

I understand Mr Alden intends to lodge a planning application for a residential dwelling on the plot. This report has been commissioned to be submitted as part of that planning application.

## 1.5 Scope of this report

1. This report is only concerned with trees located within the curtilage of the proposed development site and any trees in neighbouring land located within proximity of the site boundary. This purpose of this report is to assess the impacts of development at the proposed site and should not be used for any other purpose.
2. Utilising the information gained, comments will be made in regard to woody vegetation found at the location, and how this, impacts upon the proposal and likewise the proposal on the retained vegetation.
3. The survey of the trees, soils and any other factor is of a preliminary nature. The trees were inspected on the basis of the Visual Tree Assessment (VTA) method developed by Mattheck and Breloer (1994). The trees were inspected from ground level with no climbing inspections undertaken. It is not always possible to access every tree and as such some measurements may have to be estimated.

## **2 THE SITE**

### **2.1 Site location**

The site is addressed as:

Land off Berry Lane, Bradley, Alresford, SO24 9RY.

### **2.2 Present land use**

The plot is presently an open grass field located opposite residential dwellings.

### **2.3 Topography**

The plot has a gentle upwards gradient running from north to south with level open grassland for the majority of the plot.

### **2.4 Tree locations**

The surveyed trees are found along the northwest boundary line and on the eastern boundary. Two hedges were surveyed which run along the northern and eastern boundaries.

### **2.5 Soils**

- 1 The soil type commonly associated with this site is shallow lime-rich soil over chalk or limestone.
- 2 The geology typically associated with this site is Seaford Chalk Formation – Chalk. Sedimentary bedrock formed circa 84 – 90 million years ago in the cretaceous period.
- 3 The data given was obtained from a desk top study which provides a general indication of soil type likely to be found on the site. This information is not comprehensive and as such a detailed soils analysis should be commissioned for information relating to structural integrity of soils in relation to building construction.
- 4 Further to the previous items this report does not provide information on soil shrinkage

### **2.6 Statutory controls**

I have not contacted the local planning authority to determine the presence of tree preservation order / conservation area constraints.

## 3 TREE SURVEY

### 3.1 Methodologies

Trees surveyed for this report have been categorised in accordance with the methodologies in BS5837:2012 "Trees in relation to design, demolition and construction-Recommendations". The survey was carried out as a ground based visual inspection only, binoculars, a nylon mallet for sounding and a metal probe were employed to aid in inspection where deemed appropriate.

### 3.2 Site visit

I carried out a site visit on day and date. All of my observations were from ground level without detailed investigation. I did not have access to trees outside of the boundaries and have confined my observations of them to what was visible from inside the site. The weather at the time of inspection was.

### 3.3 Trees surveyed

A total of 00 trees were surveyed for this report, I have detailed information on surveyed trees within the schedules found in appendix 2 of this report.

### 3.4 Tree categories

1. Trees were assessed and categorised in accordance with the methodologies set out in BS5837:2012.
2. I have plotted the position of the trees on the plans detailed below:

BALDS027-19 TSP	Tree Survey Plan
BALDS027-19 TCP	Tree Constraints Plan
BALDS027-19 TRWP	Tree Removals Work Plan
BALDS027-19 TPP	Tree Protection Plan
BALDS027-19 TMP	Tree Mitigation Plan
3. In order to provide a systematic, consistent and transparent evaluation of the trees included within this survey, they have been assessed and categorised in accordance with the methodology detailed in item 4.3 of BS5837 2012.



Table 1

British Standard BS5837:2012 Category	Trees identified within British Standard Category
Category A	T12 & T13
Category B	H1, H2, T4, T9 & T11
Category C	T1, T2, T3, T5, T6, T7, & T10
Category U	T8

### 3.5 Observations

1. Overall the trees were very good with only one tree being identified as category U, this is tree T8 which is a small tree of little significant amenity value.
2. Trees T12 & T13 are classified as A due to their form and position within the landscape.
3. Tree T2 is a mature Silver birch tree at the entrance to the main access drive, whilst this tree is of high amenity value it is only categorised as C due to the presence of bacterial canker and the power cable running through the centre of its crown.
4. Tree T5 appears to be struggling, the quantity of live buds within the crown is thin in comparison to other trees of the same species.

## **4 ARBORICULTURAL IMPACT ASSESSMENT**

### **4.1 The Proposal**

In this circumstance it is intended to construct a residential dwelling within the curtilage of the plot.

### **4.2 Access & parking areas**

It will be necessary to establish a formal exit / egress to the plot, there are restrictions on the position of the building due to conservation reasons, this greatly impacts upon the positioning of the plot entrance. It will be necessary to remove tree T9 to form an entrance into the plot, the loss of this tree will be mitigated by replanting. By removing tree T9 a much higher amenity tree can be retained without encumbering the root protection area (RPA), or requiring pruning works to facilitate access. The proposed position of the access drive will not encumber the RPA of any retained tree and as such standard construction techniques can be implemented.

### **4.3 Demolition**

There is no demolition associated with this proposal.

### **4.4 Construction**

1. Building position – The footprint of the building does not encumber the RPA's of any retained trees but the corner of the foundation is in proximity to the RPA of tree T4 (see below). The above ground structure marginally encroaches upon the crown of tree T5, minor lateral branch reduction will negate the impact.
2. Excavations – There is a requirement for the excavation of footings within proximity to tree T4 to be carried out by hand, all other excavations can be carried out mechanically without impacting upon retained trees.
3. Services & infrastructure – Underground services can all enter the plot through the new access drive without encumbering the RPA's of retained trees.
4. Storage & mixing of materials – The plot comprises of an open field, there is sufficient space within the curtilage of the development to store materials, more specific details are given in the method statement

#### **4.5 Tree Protection**

Trees will be protected by the installation of barrier fencing (Example shown in Appendix 3) as shown on the draft tree protection plan. Barrier fencing will serve to protect both the root system and the above ground parts of the tree. All excavations within or adjacent to the RPA must be carried out by hand and in strict accordance with LPA approved method statements.

#### **4.6 Post development Implications**

1. Potential for direct damage by trees – The position of retained trees and built form is such that the issue of direct damage as a result of trees is unlikely.
2. Potential for indirect damage by trees – the soils and geology of the site are both free draining, issues of soil moisture deficit are therefore unlikely.
3. Shading – The proposed building has no significant windows on the side elevation closest to the retained trees, shade dominance from retained trees will fall into the main drive and parking area thus not affecting the building or any occupied rooms within. The juxtaposition of built form and retained trees is such that issues of shade dominance are unlikely.
4. Seasonal nuisance – Leaf, seed and fruit fall from trees is inevitable, the majority of leaf fall will be into garden and drive areas, these can be easily maintained. It is recommended that guards be installed to prevent leaves creating blockages of guttering and downpipes.
5. Future pressure for pruning/tree removal – The position of retained trees and built form is sufficiently distanced as to ensure the pressure for future tree removal does not increase as a result of development.
6. Due to the dynamic nature of trees and their interaction with the environment, their health and structural integrity is liable to change over time. Because of this it is recommended that all trees on or adjacent to the site be inspected within a time period not exceeding two years, in accordance with National Tree Safety Group guidelines.

#### 4.7 Cultural implications for trees

Table 2 below details the tree removal and pruning requirements of the proposed development.

Table 2

Tree removals to facilitate development	T9
Tree pruning requirements to facilitate development	Reduce lateral branch growth on trees T4 and T5.
Tree Removals on the grounds of condition	T8

#### 4.8 Landscaping

There is a requirement for the removal of two trees in this application, one is due to poor structural condition and the other to facilitate development. The net loss of trees as a result of development is not acceptable and to that end mitigation planting is proposed.

It is recommended that to mitigate the loss of tree T8 another Crab apple be planted along the southern boundary of the development to the east of tree T11.

It is recommended that to mitigate the loss of tree T9 a Festigate Beech – Heavy Standard, be planted between the drive and the dwelling to form additional screening for the proposal.

Details of plant specifications are given in the method statement.

#### 4.9 Conclusion

The proposed layout has considered the constraints of the plot in relation to many factors, in terms of arboricultural constraints, the proposal has managed to integrate retained trees and built form in a harmonious union that will develop to form an enhanced landscape as a result of new planting and managed tree stock.

## **5 ARBORICULTURAL METHOD STATEMENT**

### **5.1 Use of the method statement**

Tree protection measures specified within this document shall be agreed with the Local Planning Authority (LPA). If at any point tree protection measure are required to change, this must be agreed in writing with the LPA. The site manager is required to be familiar with this document, its purpose and conditions relating to it. Where clarification is required the site manager should liaise with the arboriculturalist to clarify any issues. A copy of this document, and subsequent plans should be available on site at all times and be available upon request to any persons requiring to see them.

### **5.2 Timing of operations**

In order that trees are provided maximum protection during the project, works will be phased in accordance with the following schedule.

**Phase 1** – Carry out consented tree removals and pruning.

**Phase 2** – Installation of all protective fencing and signage required to protect trees during the development.

**Phase 3** – Ground works carried out.

**Phase 4** – Above ground construction.

**Phase 5** – On completion of construction work, landscaping can be carried out. Where it is necessary to use plant and machinery as part of the landscape works, protective fencing must be retained until such machinery is off site.

**Phase 7** – Removal of all protective measure and site sign off.

### **5.3 Access**

It will be necessary to remove tree T9 to form a new access into the site. Protective fencing must be installed to protect trees T10 and T11 which are located within proximity of the new drive. The new access drive will not encumber the RPA of any retained trees and as such will not require any further protective measures or specialist construction techniques.

#### 5.4 Required tree works

There is a requirement for the removal of several trees as well as pruning. All works are detailed in the table below.

Tree No.	Species (Common Name)	Retention Category	Recommended works
T4	Atlas Cedar	B2	Reduce lateral branch growth on the south east part of the crown by 1 meter to suitable growth points.
T5	Silver Birch	C2	Reduce lateral branch growth on the eastern side of the crown by 1.5 meters to suitable growth points.
T8	Crab Apple	U	Remove due to poor condition.
T9	Cherry plum	B2	Remove to facilitate development access.

#### 5.4 Protective measures

Types of protective fencing and relevant ground protection are described in Appendix 3 of this report. Protective fencing must comprise of Heras weldmesh fence panels lashed to a driven scaffold frame. Protective fencing must be placed along the full length of hedges H1 and H2 circa 1 meter out from the foliage to protect them and provide sufficient room for ongoing maintenance of the hedges during the construction process. Tree T1 can be encompassed within the protection of hedge H2. Trees T2 – T5 can be protected as a group by running the fence along the edge of the tarmac drive and back down the field to hedge H2. Trees T10 and T11 can also be encompassed together as a group. The fencing should be placed across the field to meet with the southern end of hedge H1, this will prevent construction activity in the southern half of the field.

#### 5.5 Demolition

There are no demolition requirements.

#### 5.6 Construction

1. Construction techniques – There are no requirements for specialist construction techniques.
2. Working Space – There are no requirements to carry out any work within the RPA's of retained trees.

- 3 Excavations – The foundation trench in the far north west corner “must be excavated by hand only”, no mechanical excavation should be used. If roots below a diameter of 25mm are discovered they can be pruned using secateurs, where roots above the diameter of 25mm are unearthed, they should be covered in hessian cloth and maintained in a damp condition and further advice must be sought from an arboriculturalist. All other excavations can proceed without specialist techniques, all excavated spoil should be stored outside of RPA's.
- 4 Implications of sloping ground & levels - The arboricultural implications of the proposed structures are based on an assumption that level changes will not occur within the RPA of trees that are shown to be retained.
- 5 Services – All underground services can be installed through the new access drive without affecting retained trees.
- 6 Material storage & site office / welfare units – The site compound, storage area should be located in the new parking area to the south of the new dwelling. The mixing of cement/concrete must not take place in protected areas. The mixing area should be contained within a bund to retain any spillages. All tool cleaning should also take place within this area.

### 5.7 Mitigation planting

Two trees have been identified for removal. The table below details replacement planting to mitigate their loss.

Species – Latin / Common Name		Quantity	Potted / Root Ball / Whips / & size	Attributes
Fagus sylvatica Dawyck	Festigate Beech	1	Root ball / heavy standards – 14-16cm girth	Tall slender crown with stunning foliage colours in autumn.
Acer Campestre	Filed Maple	4	Root ball / standards	Our only native maple tree, already present on the site.
Malus Sylverstris	Crab Apple	1	Root ball / standards	A small tree providing flowers in the spring and fruit for wildlife benefits during the autumn / winter.

Planting Methodology – All planting will be carried out in accordance with the methodologies and best practice guides as stated in British Standards, 8545 - Trees from Nursery to Independence in the Landscape – Recommendations.

Remove weeds culturally

Clear all rubble and break up ground to a depth of 500mm

Prepare planting pit to minimum of 75mm greater than root spread and depth (Minimum size regardless – 450x450x350mm).

Base and sides of pit to be broken by fork

Trees to be set in pit to determine best aspect for tree and position of stake (set to prevailing windward side of tree and height marked at 1/3 clear stem).

Tree removed from pit and stake driven in, stake cut to mark

Tree repositioned in pit

Backfill soil-gently agitating tree to spread soil around roots

Backfill soil to the nursery line and gently firm soil ensuring soil slopes away from the tree

75mm depth minimum of bio-mulch applied around base of tree to suppress weed growth, retain moisture and improve appearance

Attach tree tie and monitor at regular intervals



## 6 BIBLIOGRAPHY

The following technical publications and technical references have been used by the author to produce this report, whilst we acknowledge the use of these titles a direct reference may not have been made.

### **Reference: Industry Guidelines**

BS 5837: 2012, Trees in Relation to Design, Demolition and Construction – Recommendations, British Standards Institute.

BS 3998: 2010, Tree Work Recommendations, British Standards Institute.

BS 8545: 2014 Trees from Nursery to Independence in the Landscape – Recommendations, British Standards Institute.

Standards, (2017), National House Building Council

Trees in the Townscape – A guide for decision makers, Tree Design Action Group

Trees in Hard Landscape – A guide for delivery, Tree Design Action Group

Principles of Hazard Assessment and Management, 1999, Lonsdale D

Tree Root Systems, (1995) Dobson. M AAIS Publication Arboricultural Research Note (130/95/Arb)

The Body Language of Trees, (1995) Mattheck.C & Breloer H.

Tree Preservation Orders – A guide to the law and Good Practice (2000), DCLG

Tree Preservation Order Regulations

Trees and Development (1989) Matheny.N & Clark.J.R. ISA Publications

## **STATEMENT OF TRUTH**

I confirm that I have made clear which facts and matters referred to in this report are within my knowledge and which are not. I confirm that those facts within my own knowledge are true. The opinions I have expressed represent my true and complete professional opinions on the matters to which they refer.

## **END OF REPORT**

Date of signing: 30<sup>th</sup> October 2019



Richard Allen, HNC, M.Arbor.A, CAS,  
LANTRA Professional Tree Inspection Qualified, CAS accredited Arboricultural  
Mortgage Insurance and Professional Tree Inspector. Lantra instructor (Basic Tree  
Inspection).

## APPENDIX 1 - QUALIFICATIONS AND EXPERIENCE

The author of this report Mr Richard Allen is an arboricultural consultant with thirty years of experience in the forestry and arboricultural industries. He holds a level 4 qualification in woodland management & arboriculture and is professional tree inspection qualified.

### Continued Professional development

I have served in the forestry & arboricultural industries since October 1989. I have experience at both craftsman and consultant manager level working in the private sector. Continued Professional Development is monitored by the professional industry associations and societies of which I hold professional membership and is agreed in hours each year.

### Memberships

Arboricultural Association – Professional Member (M.Arbor.A)

Consulting Arborist Society – Professional Member (CAS)

As well as holding professional membership of the following organisations the author is a committee member of the Arboricultural Association midlands branch and a director of the Consulting Arborist Society.



## **APPENDIX 2 - TREE SCHEDULE**

Information on the trees as required by BS 5837 (2012), is provided in the tree schedule as follows:

### **Tree / Hedge / Group Number:**

The position of surveyed trees is marked on the accompanying site plan. To enable easy identification of trees on site I have tagged each tree with an aluminium disk at a suitable point within the lower 2.5m of the main stem. Where small trees exist in groups they may not have been tagged on site but should be identifiable from the site plan.

### **Species**

The most commonly used name is only given.

### **Tree Height**

The top height of the tree measured in meters.

### **Trunk Diameter**

Measured at 1.5m from the highest point of ground level at the base of the tree.

### **Branch Spread**

The spread of the trees canopy measured to the four cardinal points of the compass

### **Lowest Branch and direction**

The lowest most significant branch in the trees crown.

### **Crown Height**

The lowest point of the trees live crown from ground level.

### **Life stage**

Recorded a one of the following categories.

Young – Recently planted or establishing tree that could be transplanted without the need for specialist equipment, i.e. less than 150mm diameter.

Semi Mature – an established tree, but with some growth to make before reaching its potential maximum size. A tree within its first third of lifespan.

Early Mature – A tree that is reaching its ultimate potential height, whose growth rate is slowing down but if healthy, will still increase in stem diameter and crown spread. A tree in its second third of lifespan.

Mature – A mature specimen with limited potential for any significant increase in size, even if healthy. A tree in its final third of expected lifespan.

Over Mature – A senescent (declining/degradation) or moribund specimen of low vigour within its final third of lifespan. Possibly also containing sufficient structural defects with safety and/or duty of care implications.

Veteran – Specimens exhibiting features of biological, cultural or aesthetic value that are characteristic of, but not exclusive to, individuals surviving beyond the typical age range for the species concerned.

Dead – The tree is dead and cannot be clarified as a veteran tree. Its age up till death is of no significance.

### **General Observation – Condition**

Recorded as one of the following four categories additional specific comments will also be made where applicable.

Good – Generally in good health typical of the species needing little, if any, attention. Few minor defects of little overall significance such as physical damage or suppressed branches. Showing no adverse risk of failure/defects.

Fair – A tree or trees with minor but rectifiable defects or in the early stages of stress, from which it may recover. Showing minor signs of deterioration. This could include a major defect in an early life stage, or multiple minor defects. A tree that may require work to remove or improve a defect.

Poor – A tree or trees with major structural and physiological defects or stressed such that it would be a risk to retain in its current or future known situation. Unlikely to return to a good condition given time or remedial work.

Dead – A tree or trees no longer alive. However, this could also apply to those trees that are dying and will be unlikely to recover, or are becoming or have become dangerous.

### **Estimated remaining contribution**

The estimated remaining lifespan of the tree

<10 – Less than 10 years estimated life remaining contribution.

10+ estimated life remaining contribution of at least 10 years.

20+ estimated life remaining contribution of at least 20 years.

40+ estimated life remaining contribution of at least 40 years.

### **Tree Categorization**

Using the assessment criteria described in BS 5837:2012, table 1, trees can be divided into one of following four categories.

Category A – Those of high quality with an estimated remaining life expectancy of at least 40 years.

Category B – Those of moderate quality with an estimated remaining life expectancy of at least 40 years.

Category C – Those of low quality with an estimated remaining life expectancy of at least 10 years, or young trees with a trunk diameter below 150mm.

Category U – Those trees in such poor condition that they cannot realistically be retained as living trees in the context of the current land use for longer than 10

### **Root protection area (RPA)**

Radius from the centre of the tree

The whole RPA in meters squared

Tree No.	Species (Common Name)	Height (m)	Trunk Diameters	Branch Spread (m) N-E-S-W				Height and direction of first significant branch (m)	Canopy Height (m)	Maturity	General Observations. Condition and Management Recommendations	Life Expectancy	Category	RPA - radius (m)	RPA (m <sup>2</sup> )
T1	Alder Buckthorn	3.5	60	1	1	1	1	0.7 south	0.5	Young	Good - Young establishing tree.	20 to 40 yrs.	C2	0.71	1.6
T2	Silver Birch	12	580	6.7	5.7	5.3	5.6	3 west	1	Mature	Fair - Mature tree on entrance to main drive, Power cable runs through centre of crown from east to west. Main trunk bifurcates at circa 2 meters from ground level. Canker stains on main trunk below bifurcation.	10 to 20 yrs.	C2	6.96	152.2
T3	Bird Cherry	3	100	1	2	3	2	1 south	1	Young	Small multi trunk tree, suppressed by trees T2 and T4. Decay throughout the northern trunk and lower basal area of the main trunk.	10 to 20 yrs.	C2	2.93	27.1
T4	Atlas Cedar	13	460	3.3	5.9	5.4	3.8	1 south east	0.5	Semi-mature	Semi mature tree of good form. Trunk bifurcates at circa 4 meters from ground level forming north and south stems. Compression union circa 1 meter above bifurcation.	20 to 40 yrs.	B2	5.51	95.7

Tree No.	Species (Common Name)	Height (m)	Trunk Diameters	Branch Spread (m) N-E-S-W				Height and direction of first significant branch (m)	Canopy Height (m)	Maturity	Comment	Life Expectancy	Category	RPA - radius (m)	RPA (m2)
T5	Silver Birch	11	250	3	5.2	4.4	2.9	3 east	4	Semi-mature	Semi mature tree. Minor deadwood throughout the crown.	20 to 40 yrs.	C2	3	28.3
T6	Apple	3	80, 80	2.3	1.3	2	2.2	1 east	1	Semi-mature	Small apple tree. No noted issues.	10 to 20 yrs.	C2	5.8	1.35
T7	Mountain Ash	3	30	1	1	1	1	0.2 south	0.2	Young	Old stump which has coppice. Multiple stems which are all very thin and spindly. Decay evident within the old trunk.	<10 yrs.	C2	1.14	4.1
T8	Apple	3	60	0.5	2	1.5	0	2 east	1	Young	Small tree, old wounds throughout trunk. Poor crown formation.	10 to 20 yrs.	U	N/A	N/A

Tree No.	Species (Common Name)	Height (m)	Trunk Diameters	Branch Spread (m) N-E-S-W				Height and direction of first significant branch (m)	Canopy Height (m)	Maturity	Comment	Life Expectancy	Category	RPA - radius (m)	RPA (m <sup>2</sup> )
T9	Cherry Plum	7	280	3.7	3.7	3.3	4.6	1.4 east	1.2	Semi-mature	Attractive tree of good form and vigour.	20 to 40 yrs.	B2	3.36	35.5
T10	Apple	6	100	2.2	1.6	1.8	2.3	0.6 south	1	Young	Attractive tree but suppressed from the south by adjacent Hornbeam tree.	10 to 20 yrs.	C2	1.19	4.5
T11	Hornbeam	12	500	5.3	5	4	5.8	1.4 east	2	Mature	Tree of good form and vigour.	20 to 40 yrs.	B2	6	113.1
T12	Tulip Tree	8	180, 200	3	4	3.7	2.5	1 east	0.5	Semi-mature	Tree of good form and vigour.	>40 yrs.	A2	3.23	32.8



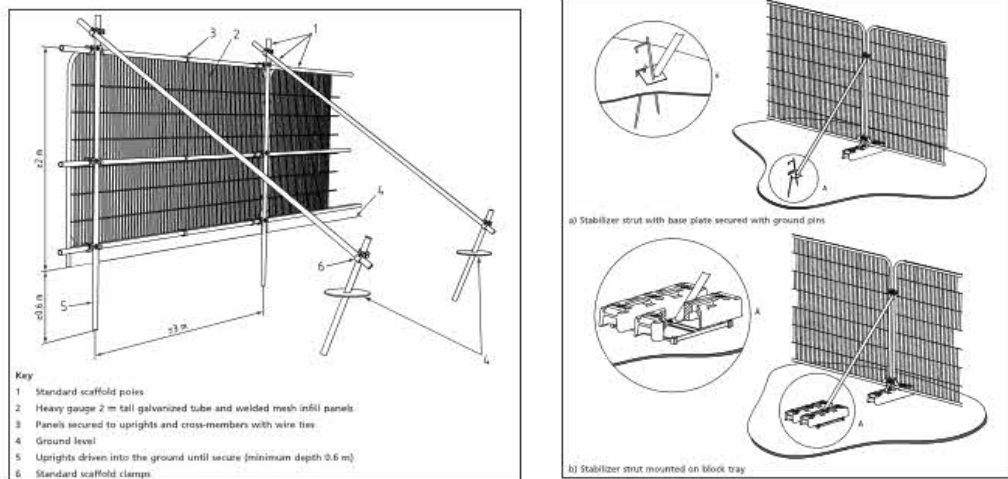
Tree No.	Species (Common Name)	Height (m)	Trunk Diameters	Branch Spread (m) N-E-S-W				Height and direction of first significant branch (m)	Canopy Height (m)	Maturity	Comment	Life Expectancy	Category	RPA - radius (m)	RPA (m2)
T13	Silver Birch	7	200	2.5	2	2	2	1.6 west	2	Young	Tree of good form and vigour. Tree located in third party ownership.	>40 yrs.	A2	2.4	18.1
H1	Beech	2	50	1 meter from centre of line.				0.3 west	0.2	Young	Beech hedge running along boundary.	20 to 40 yrs.	B2	1.5	124.5
H2	Blackthorn	3	50	1 meter from centre of line.				0.3 north	0.2	Semi-mature	Buckthorn hedge running along the northern boundary. Previously laid.	20 to 40 yrs.	B2	1.5	103.8

## APPENDIX 3 – PROTECTIVE MEASURES

There is a necessary and mandatory requirement to protect all retained trees during the construction process. Protective measures must consider the above and below ground constraints of trees. Protective measures must also be employed where demolition work is to be carried out.

### Above ground protection

Protective fencing must be placed in accordance with the approved tree protection plan. The edge of each RPA is denoted by a pink line, this is at the radius distance from the centre of the tree and will encompass the full RPA in meters squared. The radius and area in meters squared are found within the tree schedule in appendix 2 of this document. Examples of protective fencing are shown in the following diagrams which are taken from BS 5837 – 2012.



Examples of protective fencing

Protective fencing should comprise of Heras panels or similar, interlocked and attached firmly to a driven scaffold frame braced to withstand impacts.

Warning signs must be attached to protective fencing to inform site users and operatives that protective fencing must not be moved. An example of such a sign is shown on the following page.



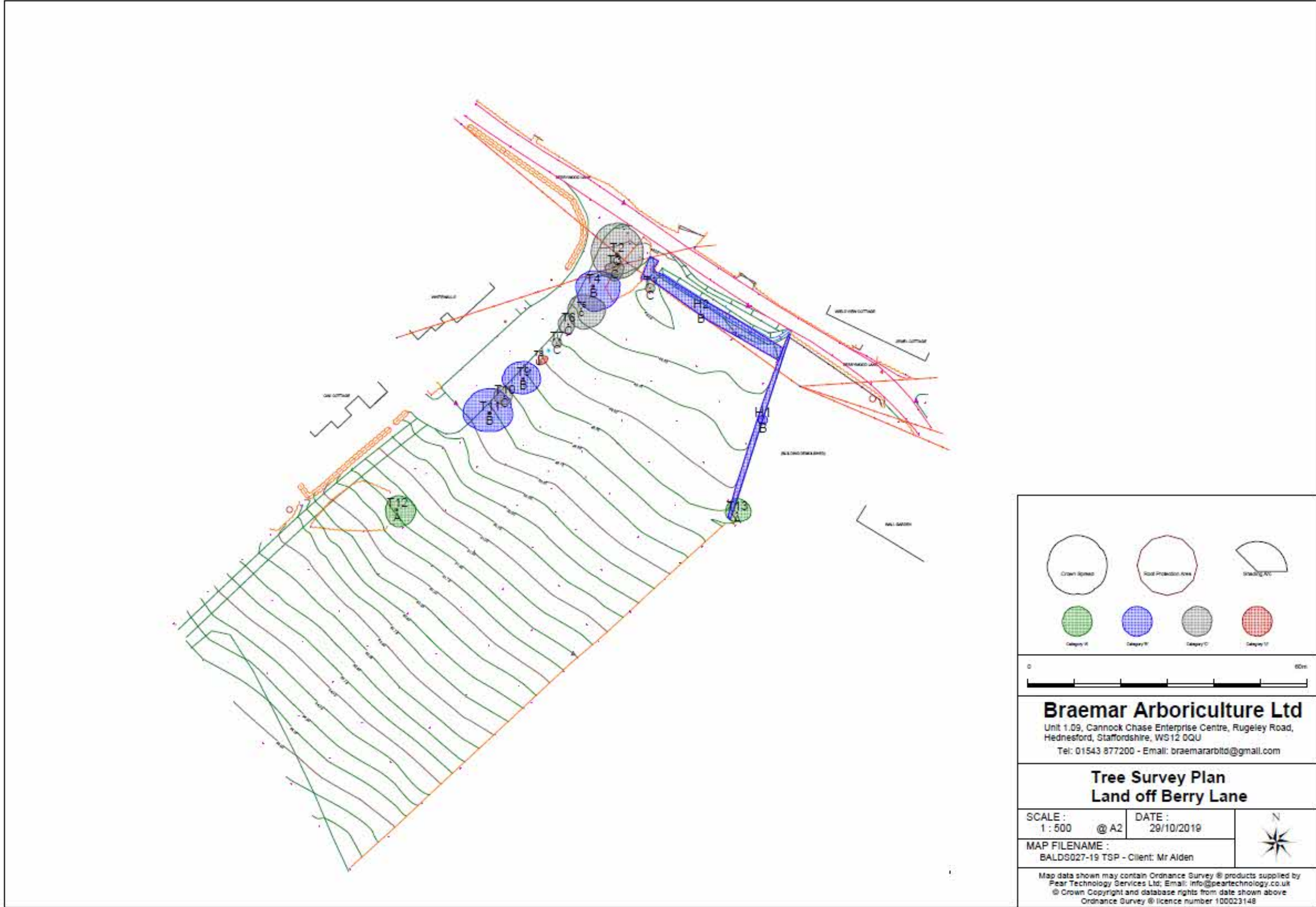
Example of RPA warning sign

### **Additional precautions**

The planning of site operations should consider the implications of wide loads, and the access and movement of plant with booms, jibs and counterweights. The use of these plant items should be considered so as to prevent contact with retained trees. Any movement of site should be under the supervision of a “banksman” to ensure that adequate clearance is maintained at all times.

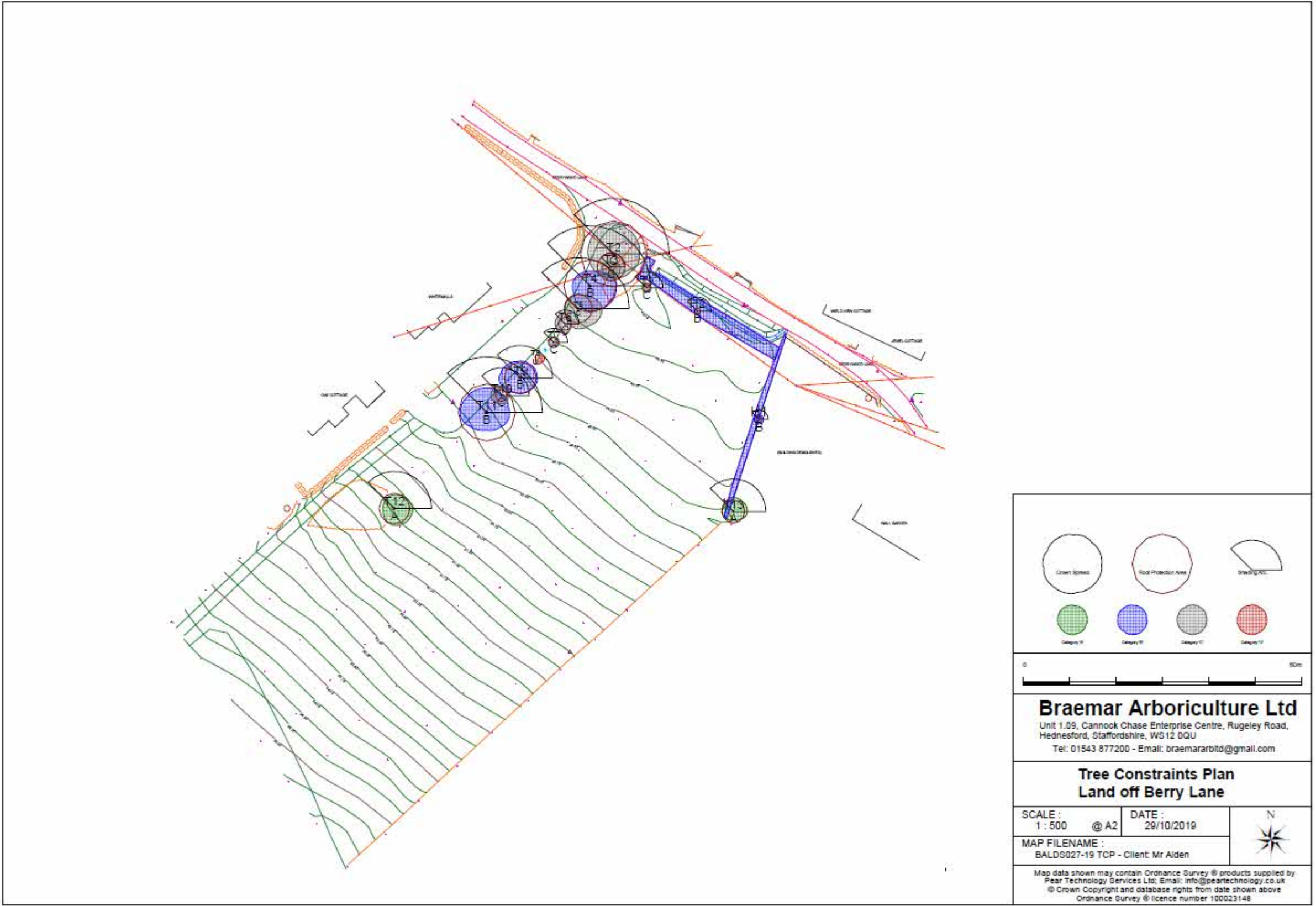
## APPENDIX 4 – DRAWINGS

Drawing File Reference	Drawing Title	Original Drawing Scale
BALDS000-19 TSP	Tree Survey Plan	1:200@A2
BALDS000-19 TCP	Tree Constraints Plan	1:200@A2
BALDS000-19 TRWP	Tree Removal & Works Plan	1:200@A2
BALDS000 19 TPP	Tree Protection Plan	1:200@A2
BALDS027-19 TMP	Tree Mitigation Plan	1:200@A2
The following drawings are for illustrative purposes only, scale drawn plans are submitted in Printed Document Format (PDF).		

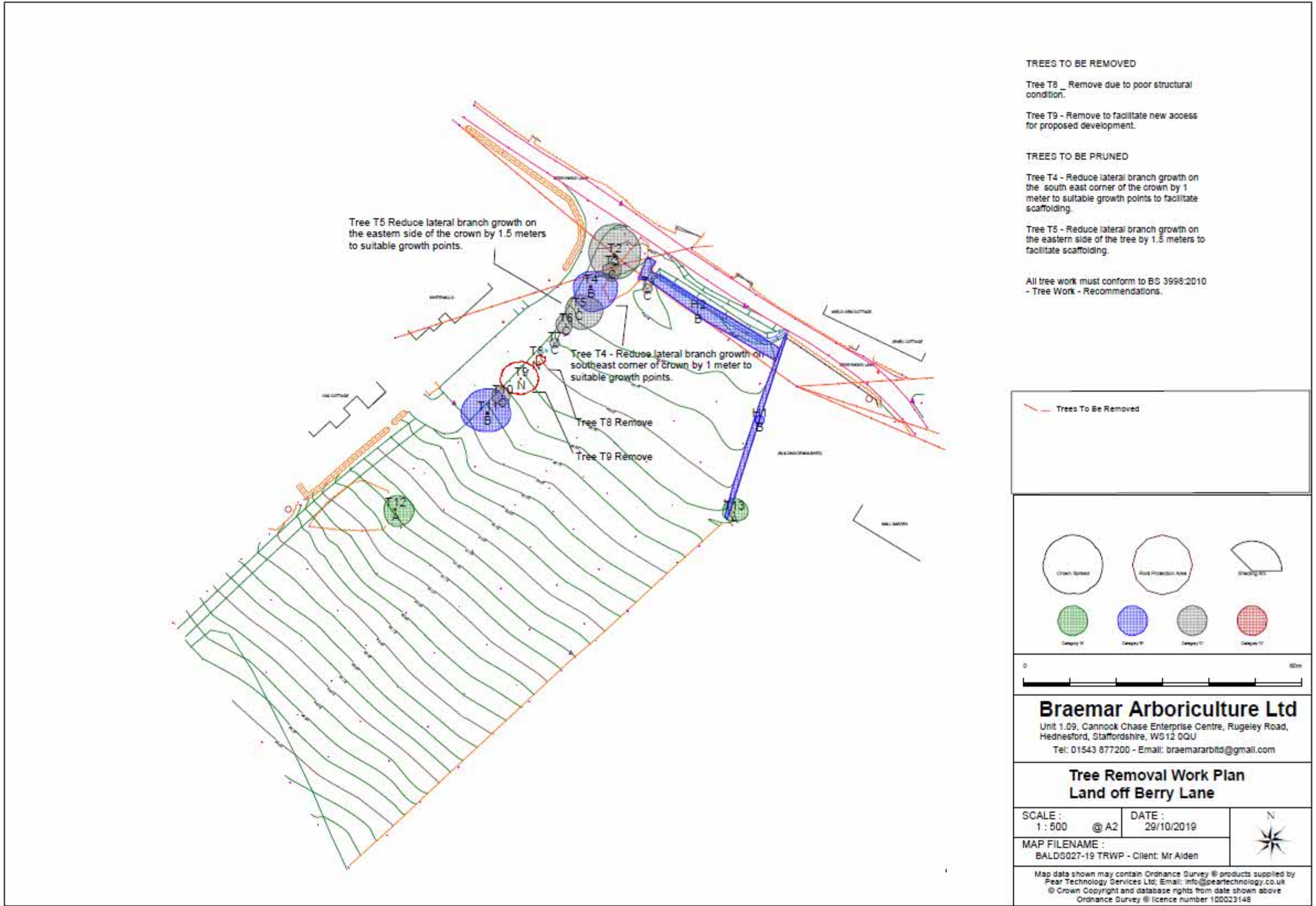


BS5837 Tree report at land off Berrywood Lane, Bradley.  
 For Mr D Alden  
 Report Reference; BALDS027-19 – Date of issue: 30<sup>th</sup> October 2019





BS5837 Tree report at land off Berrywood Lane, Bradley.  
 For Mr D Alden  
 Report Reference; BALDS027-19 – Date of issue: 30<sup>th</sup> October 2019



**TREES TO BE REMOVED**

Tree T8 - Remove due to poor structural condition.  
 Tree T9 - Remove to facilitate new access for proposed development.

**TREES TO BE PRUNED**

Tree T4 - Reduce lateral branch growth on the south east corner of the crown by 1 meter to suitable growth points to facilitate scaffolding.  
 Tree T5 - Reduce lateral branch growth on the eastern side of the tree by 1.5 meters to facilitate scaffolding.

All tree work must conform to BS 3998:2010 - Tree Work - Recommendations.

--- Trees To Be Removed

Crown Spread
 Root Protection Area
 Shade/RT  
 Category VI
 Category III
 Category II
 Category I



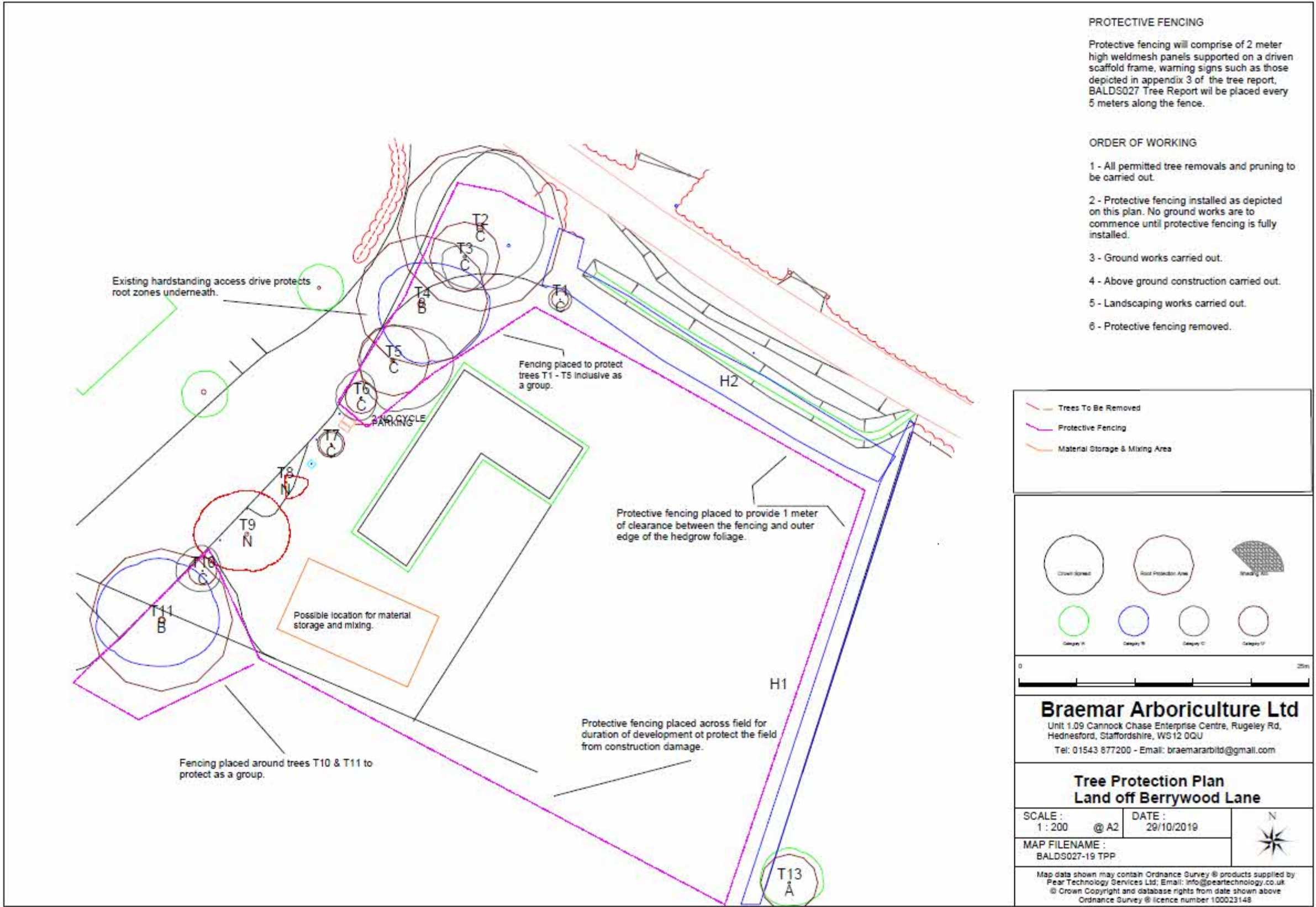
**Braemar Arboriculture Ltd**  
 Unit 1.09, Cannock Chase Enterprise Centre, Rugeley Road,  
 Hednesford, Staffordshire, WS12 0QU  
 Tel: 01543 877200 - Email: braemararbitd@gmail.com

**Tree Removal Work Plan  
 Land off Berry Lane**

SCALE: 1 : 500 @ A2	DATE: 29/10/2019	
MAP FILENAME: BALDS027-19 TRWP - Client: Mr Alden		

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**PROTECTIVE FENCING**

Protective fencing will comprise of 2 meter high weldmesh panels supported on a driven scaffold frame, warning signs such as those depicted in appendix 3 of the tree report, BALDS027 Tree Report will be placed every 5 meters along the fence.

**ORDER OF WORKING**

- 1 - All permitted tree removals and pruning to be carried out.
- 2 - Protective fencing installed as depicted on this plan. No ground works are to commence until protective fencing is fully installed.
- 3 - Ground works carried out.
- 4 - Above ground construction carried out.
- 5 - Landscaping works carried out.
- 6 - Protective fencing removed.

— Trees To Be Removed  
— Protective Fencing  
— Material Storage & Mixing Area

Crown Spread      Root Protection Area      Shading  
 Category I      Category II      Category III      Category IV

0 25m

**Braemar Arboriculture Ltd**  
 Unit 1.09 Cannock Chase Enterprise Centre, Rugeley Rd,  
 Hednesford, Staffordshire, WS12 0QU  
 Tel: 01543 877200 - Email: braemaraarb@btinternet.com

**Tree Protection Plan  
 Land off Berrywood Lane**

SCALE: 1 : 200 @ A2	DATE: 29/10/2019	N ★
MAP FILENAME: BALDS027-19 TPP		

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