



Invicta Arboriculture
Tree and Woodland Consultancy

Pre-development Tree Survey and Report

Dickley Wood
Ashford Road
Harrietsham
Kent
ME17 1BJ

12th October 2022



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Table of Contents

	Page
Executive Summary	
1 INTRODUCTION	4
2 SITE VISIT AND OBSERVATIONS	5
3 APPRAISAL	6
4 TREE CONSTRAINTS PLAN	8
5 ARBORICULTURAL IMPACT ASSESSMENT	9
6 ARBORICULTURAL METHOD STATEMENT AND TREE PROTECTION PLAN	11
7 RECOMMENDATIONS	15
8 BIBLIOGRAPHY	15

Appendices

- A Tree schedule and explanatory notes**
 - B Tree constraints plan**
 - C Tree protection plan**
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Executive Summary

1. **Brief:** Invicta Arboriculture has been appointed to provide arboricultural advice relating to the proposed development. This survey and report has been prepared in accordance with BS5837:2012 “Trees in relation to design, demolition and construction – Recommendations.
2. **Proposal:** The planning application seeks to erect a single detached dwelling house and associated vehicular driveway.
3. **Survey:** The site was surveyed on 12th October 2022 following the guidance contained within BS5837:2012.
4. **Statutory designations:** The application site is not subject any Tree Preservation Orders. The application site is not located within a Conservation Area.

The adjacent Dickley Wood, located to the north of the application site is recorded as Ancient Semi Natural Woodland (ASNW).

5. **Arboricultural impact:** The arboricultural impact of the proposed scheme is considered to be low as all trees are to be retained.

The proposed dwelling will be positioned in excess of fifteen metres away from the adjacent ASNW and outside of the RPA’s of all retained trees. The closest point of the proposed dwelling to the ASNW is 16.5 metres.

BS5837 compliant fencing will be erected to ensure the protection of all retained trees.

1 INTRODUCTION

1.1 **Brief:** I am instructed by Mr Neil Frost to provide a pre-development arboricultural report in accordance with BS5837:2012 in respect of trees at Dickley Wood, Ashford Road, Harrietsham, Kent, ME17 1BJ to accompany a planning application for the erection of a detached dwelling house and associated vehicular driveway.

1.2 **Qualifications and experience:** I have based this report on my site observations and the information provided, and I have come to conclusions in the light of my experience as an arboriculturist.

I am a professional member of the Consulting Arborist Society.

I am a Technician member of the Arboricultural Association.

1.3 **Documents and information provided:** I was provided with the following documents:

- A plan of the site as existing.
- A plan of the site as proposed.

1.4 **Report limitations:** This report is only concerned with the seven trees, one hedgerow group and the woodland shown on the tree constraints plan at Appendix B. It takes no account of any other trees. It includes a detailed assessment based on the site visit and the documents provided, listed in 1.3 above.

This report has been prepared on the basis of the proposed development and should not be interpreted as a report on tree health and safety. Whilst reasonable effort has been made to identify visible structural and physiological defects whilst undertaking the survey, trees and shrubs are living organisms; the health and stability of which can change rapidly; especially in the event of extreme weather conditions, therefore all recommendations given are valid for a period of twelve months from the date of this report.

1.5 **Collection of data:** The survey was carried out using the following inspection aids:

- Digital clinometer- To calculate the height of the trees
- Girthing tape- To measure stem diameter
- Leica Disto D1 Laser Measurer – To calculate canopy spreads

2 SITE VISIT AND OBSERVATIONS

- 2.1 **Site visit:** I carried out a single, unaccompanied site visit on 12th October 2022. All of my observations were from ground level within the application site. The weather at the time of inspection was mild and sunny with good visibility.
- 2.2 **Brief site description:** The application site is located to the south of the main A20 Ashford Road between the villages of Harrietsham and Lenham in rural mid-Kent and comprises a former paddock. The topography of the site is relatively flat. The site is not particularly exposed.



- 2.3 **Identification and location of the trees:** The trees, hedgerow and woodland subject to this report are located along the eastern and northern boundaries of the application site. I have illustrated the approximate location of the trees, woodland and hedgerow on the tree constraints plan included at Appendix B. This plan is for illustrative purposes only and it should not be used for directly scaling measurements. All of the relevant information and measurements on it are contained within this report and the provided documents.
- 2.4 **Collection of basic data:** I collected information on species, height, diameter, maturity and potential for contribution to amenity in a development context. I have recorded this information in the tree survey schedule included at Appendix A. I stress that my inspection was of a preliminary nature, and did not involve any climbing or detailed investigation beyond what was visible from accessible points at ground level within the application site.

3 APPRAISAL

3.1 **Relevant references:** This inspection was undertaken in accordance with *B.S.5837:2012 Trees in relation to design, demolition and construction - Recommendations*. The trees were inspected using the Visual Tree Assessment method as documented by Mattheck and Breloer in *'The Body Language of trees'*, ODPM Research for Amenity Trees number 4, 1994.

3.2 **British Standard 5837:2012 Trees in relation to design, demolition and construction – Recommendations:** This report is set out according to the recommendations within B.S. 5837:2012 and contains the following information relating to the trees within and adjacent to the application site.

- Tree survey schedule (included at Appendix A)
- Tree Constraints Plan (included at Appendix B)
- Arboricultural implications assessment
- Arboricultural method statement
- Tree protection plan (included at Appendix C)

3.3 Table 1: Tree quality assessment

B.S. 5837:2012 Category	Survey Numbers	Total
U	T1, T4	2
A	W7	1
B	T2, T9	2
C	T3, T5, T6, T8	4

3.4 T1, Copper Beech is located immediately adjacent the main access driveway and existing detached bungalow that is to be demolished to enable the proposed development. A multitude of fungal fruiting bodies of the decay fungi *Meripilus giganteus* are evident around the circumference of the base of the tree and within the ground around it and as such extensive decay is suspected throughout the underside of the trees root plate.

Meripilus giganteus is a significant fungal pathogen associated with Beech trees, with infected trees having a relatively high incidence of uprooting even in calm weather conditions. Canopy condition is not a reliable indicator of the extent of root plate weakening. Also, the condition of the roots near the surface can be misleading as the decay tends to be confined to the underside of the deeper roots.

It is my opinion that the tree is formally unsafe and poses an unacceptable risk to the adjacent bungalow and users of the wider site and should be felled to ground level regardless of the development proposal at the earliest opportunity and in any case within one month of the date of this report due to the unacceptable risk it poses.

I include several photographs of the fungi at the base of the tree below:



3.5 T2, T3 and T4 (Scots Pine) along with T5 (European Larch) are located towards the eastern boundary of the site. T2, T3 and T5 all display good overall vitality with no significant visible structural or physiological defects, pose no constraints on the proposed development and are to be retained.

T4 appears to be in heavy decline and displays a very sparse canopy in comparison with T2 and T3. A recommendation is made for the removal of T4 regardless of the development proposal.

3.6 G6, Leyland Cypress hedgerow extends along the eastern boundary of the application site. The hedgerow displays good overall form and vitality and is to be retained. The hedgerow poses no constraints on the development proposal.

3.7 W7, Dickley Wood is located to the north of the application site and is recorded as an Ancient Semi Natural Woodland (ASNW). The woodland comprises mature Oak, Ash and coppice Hornbeam and is separated from the application site by a robust post and rail fence. Current legislation requires that a minimum fifteen-metre buffer zone exists between an ASNW and any new development. A minimum separation distance of 16.5 metres will exist between the ASNW and the proposed dwelling.

3.8 T8 (Ash) and T9 (Hornbeam) are the largest trees present within the ASNW closest to the boundary of the application site. Ash dieback is evident within the canopy of T8, but to no great extent currently and as such it is considered to pose an acceptable risk and is to be retained. T9 displays good overall form and vitality with no significant visible structural or physiological defects and is to be retained.

4 TREE CONSTRAINTS PLAN

4.1 The tree constraints plan is primarily a design tool which shows the below ground constraints represented by the calculated root protection area and the above ground constraints represented by the current and ultimate heights of the trees and the potential effects of shade on any proposed development. The tree constraints plan is included at Appendix B.

4.2 Below ground constraints:

- The root protection area (RPA) is the minimum area around a tree deemed to contain sufficient roots and rooting volume to maintain the trees viability and where the protection of the roots and soil structure is treated as a priority. The RPA is measured in m². The RPA is shown as a red circle on the tree constraints plan. The RPA of the trees within the adjacent woodland are not shown on the tree constraints plan as the woodland is unaffected by the development proposal.
- The root protection area relates to the stem diameter of each tree when measured at a height of 1.5m from ground level. For single stem trees the RPA is calculated as an area equivalent to a circle with a radius of twelve times the stem diameter (or the mean diameter of the total number of stems in the case of multi-stemmed trees).
- No below ground constraints are considered to exist as the proposed dwelling and associated vehicular driveway will be constructed outside of the RPA's of all retained trees.

4.3 Above ground constraints:

- There are no above ground constraints.

5 ARBORICULTURAL IMPACT ASSESSMENT

- 5.1 **Arboricultural impact:** The arboricultural impact of the proposed scheme is considered to be low as all trees are to be retained and protected against the proposed development.

The proposed dwelling and associated vehicular driveway will be positioned in excess of fifteen metres away from the adjacent ASNW and outside of the RPA's of all trees. The closest point of the proposed dwelling to the ASNW is 16.5 metres.

BS5837 compliant fencing will be erected to ensure the protection of the retained trees.

- 5.2 **Presence of TPOs or conservation area designations:** The application site is not subject any Tree Preservation Orders. The application site is not located within a Conservation Area.
- 5.3 **Effects of new buildings on amenity value on or near the site:** The effects of the proposed development are not envisaged to have any detrimental effect on the amenity value of the retained trees or surrounding landscape providing all advice given in this report is adhered to.
- 5.4 **Above and below ground constraints:** The above and below ground constraints are discussed in section four above and shown on the tree constraints plan at Appendix B.
- 5.5 **Construction processes of the proposed development or demolition needs:** The existing detached bungalow will be demolished to enable the construction of the proposed dwelling. The procedures required to demolish the existing dwelling will not impact the retained trees and as such no special measures are required in respect of this operation.
- 5.6 **Modifications proposed to accommodate trees – Ground protection:** There are no requirements for any ground protection measures.
- 5.7 **Modifications proposed to accommodate development –tree pruning/felling:** T1 (Copper Beech) and T4 (Scots Pine) are to be removed regardless of the development proposal. No other felling or pruning is required to accommodate the development.
- 5.8 **Infrastructure requirements – highway visibility, lighting, CCTV, services etc:** The installation of services within the rooting zones of trees can have a detrimental impact on the long-term survival of retained trees leading to their unnecessary loss or root failure in high winds. The installation of services within RPA's should be avoided where possible. Where this is not possible it may be necessary to utilise a trenchless solution such as micro tunnelling, surface-launched directional drilling, impact moling or where the relative expense on low cost projects makes the use of such trenchless systems unviable, hand digging may be acceptable over short distances.

No services are to be installed within the RPA's of the retained trees.

Undisclosed siting of above ground services, CCTV cameras, electrical sub-stations, refuse stores, lighting and other infrastructure requirements can lead to unnecessary pruning of tree crowns or root loss during or post development.

The trees subject to this report do not obscure highway visibility splays.

- 5.9 **End use of space:** The application seeks to erect a detached dwelling house with associated vehicular driveway.
- 5.10 **Mitigating tree loss/ new planting:** A fifteen metre buffer zone will exist between the southern edge of the ASNW and the proposed dwelling and will be used for biodiversity enhancement. The details of the biodiversity enhancement are outside the scope of this report and are not discussed any further.
- 5.11 **Veteran trees:** None of the trees are considered to be veterans.
- 5.12 **Impact of trees on buildings and vice versa and allowance for future growth:** The impact of the trees on the proposed development and vice versa and allowance for future growth has been considered. Tree size, future growth, light/shading, leaf and fruit nuisance etc. have received due attention and are not considered to be a significant issue.

6 ARBORICULTURAL METHOD STATEMENT AND TREE PROTECTION PLAN

Arboricultural Method Statement (AMS) includes a Tree Protection Plan (TPP) to identify:

- Protective fence positions therefore the Construction Exclusion Zones (CEZ) shown as a blue line on the TPP at Appendix C.
- Measurements to identify fence positioning in relation to the centre of the tree are recorded in the tree survey schedule at Appendix A.

1.0 Construction Exclusion Zone

- 1.1 The Construction Exclusion Zone (CEZ) as required by the current edition (2012) BS 5837 relates to the stem diameter of each retained tree when measured at a height of 1.5m from ground level or the mean diameter of the total number of stems in the case of multi-stemmed trees.

2.0 Protective Fencing

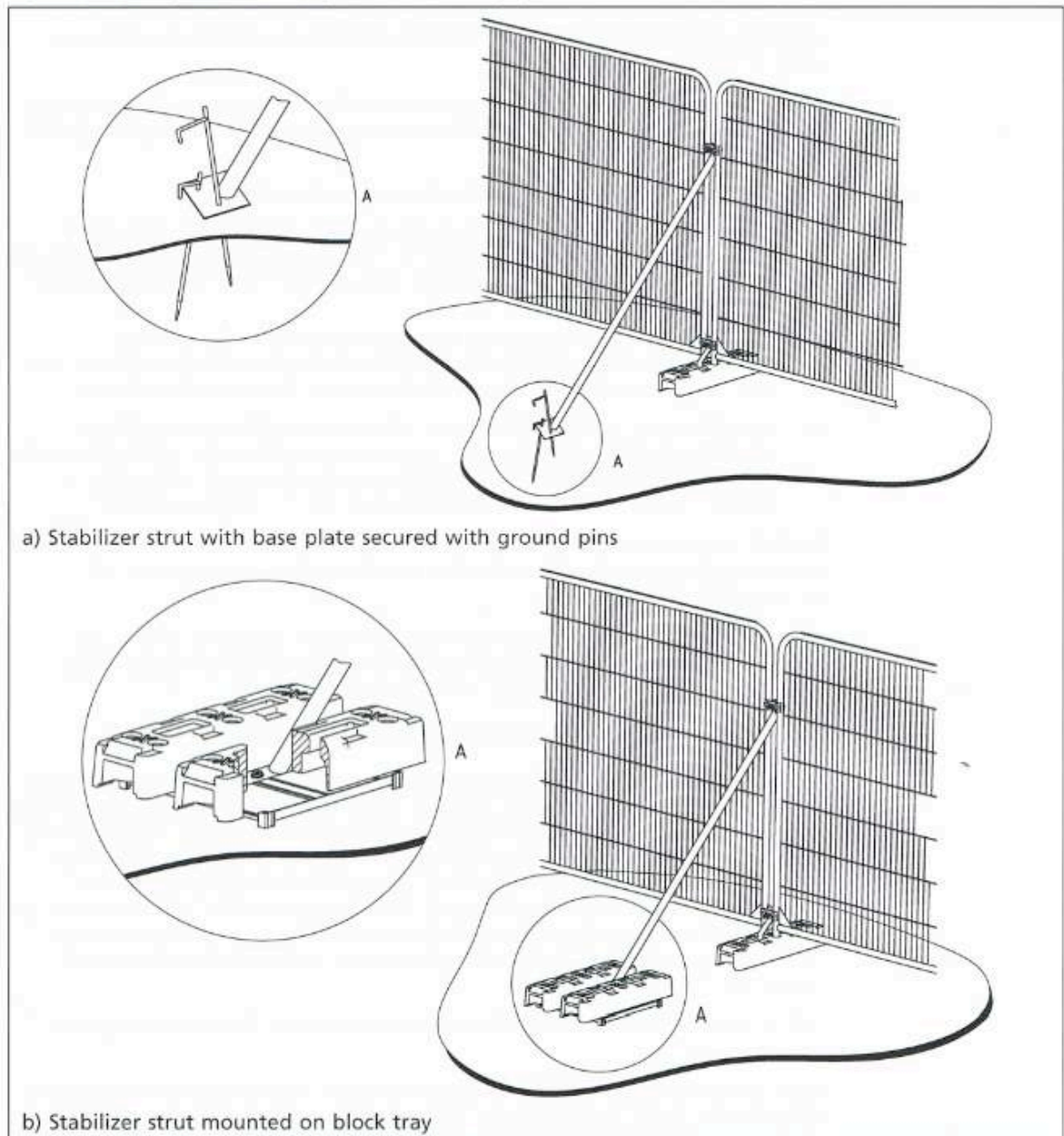
- 2.1 Protective fencing will be erected around all retained trees prior to the commencement of any site works e.g. before any materials or machinery are brought on site, development or the stripping of soil commences. The fence should have signs attached to it stating that this is a Construction Exclusion Zone and that **NO WORKS are Permitted** within the fence. The protective fencing may only be removed following completion of all construction works.

The RPA's of T2 to T5 extend across the existing vehicular driveway and parking area of the existing property 'Dickley Wood' and will not be fenced off to their full extent, but will however have protective fencing erected around them to prevent the storing of plant, machinery and materials around their bases.

The woodland (W7) will not require any protective fencing as it is separated from the application site by the existing robust post and rail fence, however the RPA's of the two largest trees (T8 and T9) will be afforded full protection, which will by extension safeguard the woodland.

- 2.2 The fencing is required to be sited in accordance with the Tree Protection Plan enclosed within this method statement at Appendix C. The fencing shall be constructed as per figure 3 - B.S.5837: 2012 and be fit for the purpose of excluding any construction activity.
- 2.3 An example of protective fencing: Figure 3 - B.S.5837: 2012, is shown below...

Figure 3 Examples of above-ground stabilizing systems



3.0 Precautions in respect of temporary works

3.1 There are no requirements in respect of temporary works.

4.0 Access Details

4.1 Construction traffic will access the site via the existing vehicular entrance from the A20 Ashford Road.

5.0 Contractors car parking

5.1 Adequate parking provision is available on site away from all retained trees.

6.0 Site Huts and Toilets

6.1 Adequate space is available on-site and away from the retained trees for all site huts and portable toilets if required.

7.0 Storage Space

7.1 Adequate space is available on site and away from all retained trees for the storage of all plant, machinery and materials.

8.0 Additional Precautions

8.1 The installation of services near any tree will be undertaken in accordance with the National Joint Utilities Group Guidance Note 4 (NJUG 4): Guidelines for the Planning, Installation and Maintenance of Utility Apparatus in Proximity to Trees. A copy of this document can be provided on request.

8.2 No storage of materials or lighting of fires will take place within the CEZ. No mixing or storage of materials will take place up a slope where they may leak into a CEZ.

8.3 No fires should be lit within 20 metres of any tree stem and will take into account fire size and wind direction so that, no flames come within 5m of any foliage.

8.4 High-sided vehicles will have access to the site. Their movements around the site will be in no way detrimental to the health or stability of the retained trees.

8.5 No notice boards, cables or other services will be attached to any tree.

8.6 Materials that may contaminate the soil should not be discharged within 10m of any tree stem. When undertaking the mixing of materials it is essential that any slope of the ground is taken in to consideration so that it does not allow contaminates to run towards a tree root area.

9.0 Site Gradients

9.1 I am not currently aware of the need to alter site gradients.

10.0 Demolition

10.1 The existing detached bungalow will be demolished.

11.0 Hard Surfaces

11.1 No new hard surfacing will be formed within the RPA's of the retained trees.

12.0 Soft landscaping

12.1 Soft landscaping details are outside the scope of this report.

13.0 Use of Herbicides

13.1 I am not aware of the need to use herbicides on the site.

14.0 On site Monitoring Regime

14.1 All operations will be monitored by the main contractor.

15.0 Use of subcontractors

15.1 The main contractor will be responsible for ensuring sub-contractors do not carry out any process or operation that is likely to adversely impact upon any trees adjacent to the application site.

16.0 Contingency Plan

16.1 Water should be made readily available on site and should be used to flush spilt materials through the soil and avoid contamination to tree roots. At the time of any spillage the main contractor will contact the project arboriculturist for advice.

17.0 Remedial Tree Works

17.1 There are no requirements for any remedial tree works.

18.0 Responsibilities

18.1 It is the responsibility of the main contractor to ensure that the planning conditions attached to planning consent are adhered to at all times and that a monitoring regime in regards to tree protection is adopted on site if required.

18.2 The main contractor will be responsible for contacting the project arboriculturist or Local Planning Authority (Maidstone Borough Council) at any time issues are raised in relation to the trees adjacent to the site.

7 RECOMMENDATIONS

- 7.1 **Implementation of works:** All tree works should be carried out in accordance with the 2010 revision of BS 3998 *Recommendations for Tree Work*, or as modified by more recent research. It is advisable to select a contractor from the local authority list and preferably one approved by the Arboricultural Association. Their Register of Contractors is available free from The Malthouse, Stroud Green, Standish, Stonehouse, Gloucestershire GL10 3DL; Telephone 01242 577766; Website. <http://www.trees.org.uk/find-a-professional/Directory-of-Tree-Surgeons>.
- 7.2 **Statutory wildlife obligations:** The Wildlife and Countryside Act 1981 as amended by the Countryside and Rights of Way Act 2000 provides statutory protection to birds, bats and other species that inhabit trees. All tree work operations are covered by these provisions and advice from an ecologist must be obtained before undertaking any works that might constitute an offence.
- 7.3 **Future considerations:** The remaining trees should be inspected on a regular basis by a qualified arboriculturist.

8 BIBLIOGRAPHY

- 8.1 Claus Mattheck and Helge Breloer, *The Body Language of Trees*. Office of the Deputy Prime Minister, Research for Amenity Trees No 4, 1994.

David Lonsdale, *Principles of Tree Hazard Assessment and Management*. Department for Transport, Local Government and the Regions, 1999.

British Standard 3998:2010 Recommendations for tree work

British Standard 5837:2012 Trees in relation to design, demolition and construction-Recommendations.

Mr David Sephton Tech Cert (Arbor. A)

Appendix A:

Tree Schedule and Explanatory Notes

- **Number:** Number of tree as shown on site plan.
- **Species:** Tree name is given using its commonly known English name.
- **Hgt:** Height is estimated using a clinometer and given to the nearest metre.
- **St Dia:** Stem Diameter. Estimated stem diameter, measured 1.5 metres above ground level and given in millimetres.
- **N-E-S-W:** Crown Spread, estimated by pacing and given in metres.
- **Cr Cl:** Crown Clearance above ground level, given in metres.
- **AC:** Age Class. young (Y), semi mature (SM), mature (M), over mature (OM), veteran(V).
- **PC:** Physiological Condition. Good (G), fair (F), poor (P), dead (D).
- **SC:** Structural Condition. Good (G), fair (F), poor (P).
- **Recommendations:** Preliminary management recommendations/ general comments.
- **ERCY:** Estimated remaining contribution in years (0-10, 10-20, 20-40, 40+).
- **Cat:** Retention Category. See table 2 below.
- **RPA Radius:** Root Protection Area Radius, given in meters.

Table 2: Retention Category's (as per cascade chart, Table 1, B.S. 5837:2012)

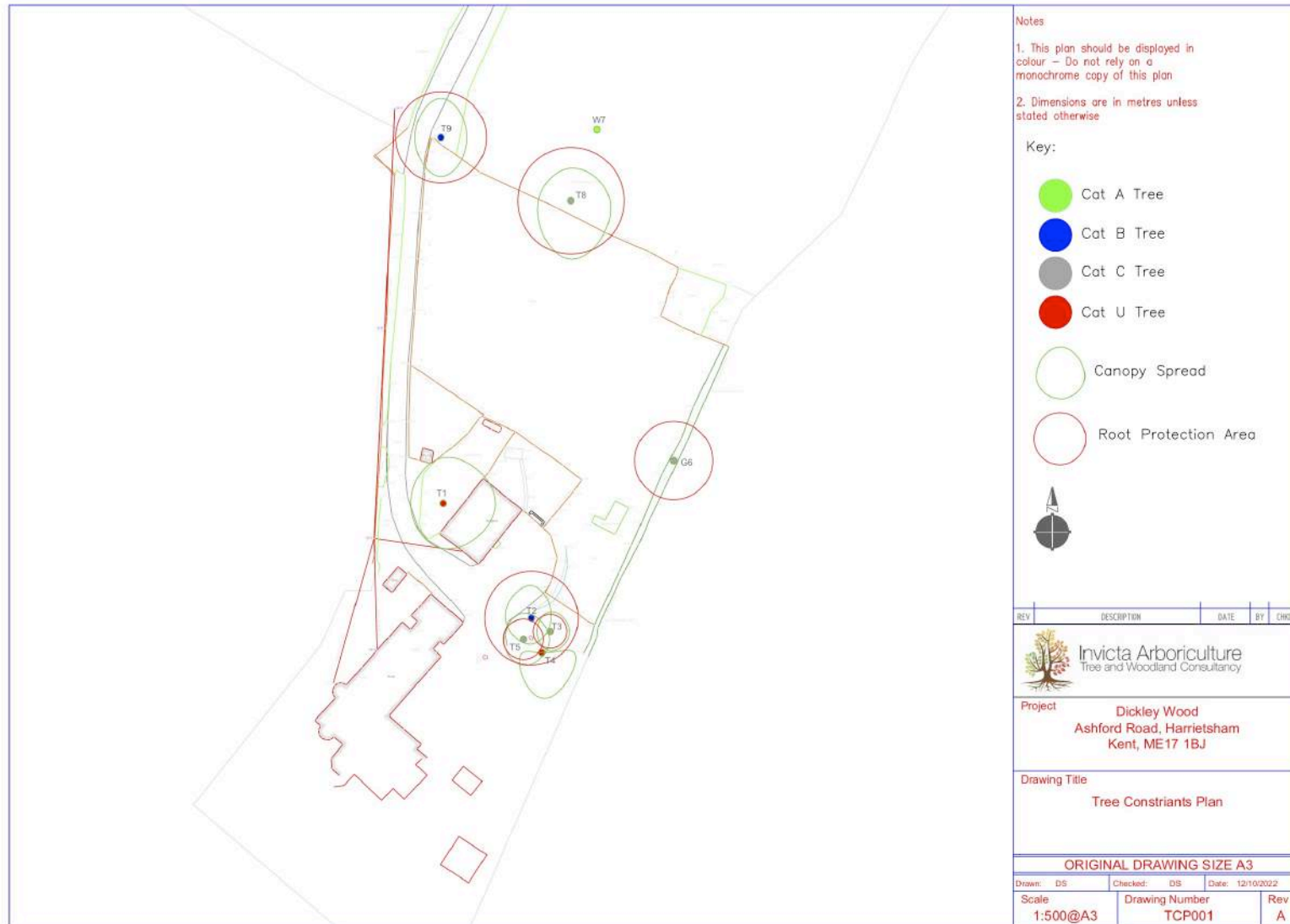
U	Those trees in such a condition that they cannot be realistically be retained as living trees in the context of the current land use for longer than ten years. Shaded Red on site plan.
A	High quality and value (40yrs +) 1: Mainly arboricultural values, 2: Mainly landscape values, 3: Mainly cultural values i.e. conservation. Shaded Green on site plan.
B	Moderate quality and value (20yrs +) 1: Mainly arboricultural values, 2: Mainly landscape values, 3: Mainly cultural values i.e. conservation. Shaded Blue on site plan.
C	Low quality and value (10yrs +) 1: Mainly arboricultural values, 2: Mainly landscape values, 3: Mainly cultural values i.e. conservation. Although category C trees would not be retained where they would pose a significant constraint on development, young trees with a stem diameter of less than 150mm should be considered for relocation. Shaded Grey on site plan.

Appendix A:

B.S. 5837:2012- Tree Survey Schedule: Dickley Wood, Ashford Road, Harrietsham, Kent, ME17 1BJ.

Number	Species	HGT	St Dia	N-E-S-W	CC	Age	PC	SC	Recommendations	E.R.C.Y	Cat	RPA Radius	RPA M²
1	Copper Beech	14	890	7-7-8-5	2	M	F	P	Remove regardless of development proposal	0-10	U	10.7	358.3
2	Scots Pine	13	600	5-4-3-4	3	M	G	G	None - Retain	20+	B1	7.2	162.9
3	Scots Pine	10	220	3-3-3-2	2	M	G	G	None - Retain	10+	C1	2.6	21.9
4	Scots Pine	12	400	0-7-5-3	4	M	P	F	Remove regardless of development proposal	0-10	U	4.8	72.4
5	European Larch	8	260	4-4-4-3	1.5	M	G	G	None - Retain	10+	C1	3.1	30.6
G6	Leyland Cypress hedgerow	13	500	4-4-4-4	0	M	G	G	None - Retain	10+	C2	6.0	113.1
W7	Oak/ Hornbeam/Ash woodland	N/A	N/A	N/A	N/A	M	G	G	None - Retain	40+	A3	0.0	0.0
8	Ash	18	680	5-9-6-5	5	M	F	G	None - Retain	10+	C1	8.2	209.2
9	Hornbeam	18	680	6-6-4-4	5	M	G	G	None - Retain	20+	B1	7.0	157.4

Appendix B: Tree Constraints Plan.



Appendix C: Tree Protection Plan.

