# Arboricultural report in support of a planning application, (BS:5837):

- Tree Survey
- Arboricultural Impact Assessment
- Tree Constraints Plan
- Tree Protections Plan

**SITE LOCATION:**

Land at The Fords
Bonfire Hill
Southwater
West Sussex
RH13 9BU

**Date of Issue:**
April 2025

# Arboricultural Impact Assessment (BS:5837)

Client:

**Paula Rixon**



## Contents

# 1.0 Introduction / Background:

## 1.1 Introduction

1.1.1 The principal author of this Arboricultural Impact Assessment, (AIA), is Nicholas Eddison BA, DipArb, Senior Arboricultural Consultant at The Sussex Tree Company. Nicholas is a Technician member of the Arboricultural Association, an Assessor for the Arboricultural Association's Approved Contractor scheme and is LANTRA certified to undertake Professional Tree Inspections.



## 1.2 Instruction

1.2.1 We are instructed by Paula Rixon, ('the client'), to undertake an arboricultural report in support of a planning application, following guidance set out in the British Standard document number 5837 "Trees in relation to design, demolition and construction – recommendations" (2012), and publish our findings in a report document, for a fee.

1.2.2 This report is an Arboricultural Impact Assessment, ('AIA'); after the 'Recommendations' section in this report, (section 10, below), a draft Arboricultural Method Statement, ('AMS'), is provided, however, a further, more detailed AMS report may be required by the Local Planning Authority, ('LPA'), as a condition of granting of planning permission.

## 1.3 Scope of project

1.3.1 The development site, ('the Site'), is located within the boundaries of a residential property, 'The Fords', located on the outskirts of the village of Southwater, close to the town of Horsham, West Sussex. The existing built structure at The Fords, (a brick under tile, detached residential house), is set within a significant parcel of land. To the west of the existing dwelling there is an area which is set to grass and is largely unused; along the frontage of the property with Bonfire Hill there are hedgerows, (which are outside of the Site), and behind these there is a wooded area, (part of which is included in the proposed development Site). The design plan is to build 2 detached, single-storey dwellings within the existing grassed areas without impacting the woodland area. The dwellings will be accessed by a newly laid roadway and each dwelling will have 2 parking spaces.

1.3.2 The scope of this project is fivefold:

I. Undertake a survey of trees on the Site and within influencing distance of the Site to fulfil the requirements of BS5837:2012 *Trees in Relation to Design, Demolition and Construction: Recommendations.*
II. Provide a Tree Constraints Plan, ('TCP'), for the Site including root protection areas and canopy spreads.
III. Provide an Arboricultural Impact Assessment, ('AIA'), in relation to the design proposal, providing comment in relation to the building orientation. The AIA will assess the trees in relation to the proposals and the potential impacts the trees will have.
IV. Provide a draft AMS which will provide guidance on methodologies to ensure the implementation of the design plan does not negatively impact any trees, or if there is impact, ensure it is rational, minimised and is sufficiently mitigated.

V. Provide a Tree Retention and Protection Plan, ('TRPP'), for the Site, showing the location of any tree protection apparatus.

## 1.4 Reference Documents

1.4.1 As background information, the following documentation has been referenced.

*Table 1: Document and Plans Provided / Referenced*

| Document Description | Reference Number | Prepared By | Date |
|---|---|---|---|
| Proposed Site Plan | DE1284 / 06 Rev P7 | DMA Building Designs | 04/2025 |
| Land at The Fords – Tree Constraints Plan | STC-LATF-TCP-03 | The Sussex Tree Company | 04/2025 |
| Land at The Fords – Tree Retention and Protection Plan | STC-LATF-TRPP-03 | The Sussex Tree Company | 04/2025 |



1.1.5 The report publishes: research methodology, findings and recommendations in relation to all existing trees and groups of trees which may be impacted by the proposed development; quantifies these trees / groups of trees according to their estimated life expectancy and quality; details whether any are to be removed in order to facilitate the development; offers mitigation strategies, with accompanying methodologies, for the protection of trees / groups of trees that are to be retained; and suggests appropriate mitigation for any trees / groups of trees to be removed. More detailed protection methodologies and mitigation strategies can be presented as a separate, detailed AMS report document, if required by the LPA. This can be ordered as a part of a planning condition accompanying the granting of planning permission.

## 1.5 Report limitations

1.5.1 The contents are intended for the sole use of the client(s), authorised agents of the client(s) and planners from the LPA in respect of this development project only. No liability is accepted for their use by any other parties to advance an argument or claim (including legal or financial) without prior consent.

*(1.5 – 'Report Limitations' continues, and sections 1.5.2. – 1.5.13 can be found in Appendix 5)*

## 1.6 Access conditions

1.6.1 Access to all parts of the property was unimpeded. Access to 3rd party or public land was not required.

## 2.0 Planning Policy and Legislation

2.1.1 *National Planning Policy Framework (NPPF):* When determining planning applications, local planning authorities, (LPAs), should aim to conserve and enhance biodiversity. If significant harm resulting from a development cannot be avoided, (through locating on an alternative site with less harmful impacts), adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused. Opportunities to incorporate biodiversity in and around developments should be encouraged (Paragraph 118).

2.1.2 When determining planning applications, LPAs aim to apply the following principles:

> *Planning permission should be refused for development resulting in the loss or deterioration of irreplaceable habitats, including ancient woodland and the loss of aged or veteran trees found outside ancient woodland,* ***unless the need for, and benefits of, the development in that location clearly outweigh the loss (paragraph 118).***



2.1.3 There are no tree removals required in order to implement the design plan. Because of this, the principles for refusal within the NPPF would not be considered applicable.

## 2.2 Statutory Tree Protections

2.2.1 The LPA has been contacted to establish whether any trees contained within the survey are protected by either a Tree Preservation Order (TPO) or are located within a local Conservation Area.

2.2.2 The LPA's online TPO map was accessed; a search for The Fords, Bonfire Hill, Southwater revealed there are no TPOs active for the Site, nor is it located within a Conservation Area. (See Appendix 4 for a screenshot of the LPA's online TPO checker).

2.2.3 It should be considered that any proposed tree works detailed in the tree schedule are also implemented as part of the planning decision consent.

## 2.3 Felling Licence

2.3.1 Tree felling is also restricted under the Forestry Act 1967. Under this act, there is an exemption from the need for a felling licence when referring *"to the felling of fruit trees or trees standing or growing on land comprised in an orchard,* ***garden****, churchyard or public open space."*

2.3.2 As there are no trees to be removed, felling licence restrictions do not apply.

## 2.4 Trees and Wildlife

2.4.1 The Wildlife and Countryside Act 1981, (as amended), the Countryside and Rights of Way Act 2000 and the Conservation of Species and Habitat Regulations 2010, (as amended) provides statutory protection of birds, bats and other species that can inhabit trees.

2.4.2 Great care is required to avoid disturbance to those species and consideration should be given to the timing of tree works in order to avoid disturbance. Where the presence of such

species is suspected and proposed works to the tree may affect any protected species, (or their habitats), the project ecologist or Natural England should be contacted for advice.

## 3.0 Site Assessment

### 3.1 Site Visit



3.1.1 A Site visit was carried out by Nicholas Eddison *BA (Hons) DipArb*, on 5th February 2025, who surveyed all the significant trees and hedgerows throughout the site, (and other relevant areas), from ground level including those with a diameter at breast height, ('DBH'), of more than 15cm, (where possible, DBH is taken at 1.5m above ground level; where this is not possible, this is indicated in the survey sheet data). The owner of the site was informed of his presence on site and prior to undertaking the inspection of the trees.

### 3.2 Site Description

3.2.1 The Site is land contained within the curtilage of The Fords, Bonfire Hill, Southwater, West Sussex. To the west of the existing dwelling, (which is to be retained without adjustments), there is a significantly sized area of little-used land set to grass. Along the property's frontage with Bonfire hill is a wooded area. The design plan concentrates on the area presently set to grass and avoids the wooded area. The only disturbance to the existing dwelling will be that the access roadway to the 'active work site' will come off the existing access roadway into the property from Bonfire Hill and head west, avoiding any impact on the wooded area.

3.2.2 Site topography:

- The existing property is roughly rectangular-shaped. The northern boundary is approximately 110m in length; the eastern boundary is approximately 87m in length; the southern boundary is approximately 110m in length; and the western boundary is approximately 82m in length.
- The Site is within the existing property at The Fords and consists roughly half of the existing property, (excluding the existing dwelling, its garden and the wooded area).
- The overall area is flat.
- Any additional construction activity, (including the storage of construction materials), is to occur outside the Root Protection Areas, ('RPAs'), of any retained tree / group of trees.
- Roughly half of the Site will be affected by the proposed development works.

3.2.3 The site's underlying geology is predominantly Clay over Mudstone:

**Superficial deposits:** Not recorded

**Bedrock geology:** Weald Clay Formation - Mudstone. Sedimentary bedrock formed between 133.9 and 126.3 million years ago during the Cretaceous period.

## 4.0 Planning Proposal

4.1.1 The planning proposal is to divide the grassed area to the west of the existing dwelling and its gardens, and to the north of the wooded area, into two plots in which single-storey dwellings will be built. These will be accessed by an internal roadway branching off the existing internal roadway and utilise the existing accessway from the property onto Bonfire Hill. Each dwelling will have 2 outside parking spaces attached.

## 5.0 Arboricultural Assessment



## 5.1 Method of Data Collection

5.1.1 The trees on the site were originally surveyed without reference to the site layout as detailed in Clause 4.4.1.1 of BS5837:2012. However, for the purposes of this arboricultural assessment, the design proposal for the site has been considered.

5.1.2 The survey recorded trees either as individual specimens or as groups of trees, where these trees were aerodynamically, culturally or visually important as groups of trees. The tree numbers associated with each tree are cross-referenced within the schedule and plans at Appendix 1 and 2 respectively. The complete method of data collection for the tree survey is provided at Appendix 6.

## 5.2 Summary of Data

5.2.1 The overall survey includes records of 17no. individual trees and 1no. hedgerow. There are thirteen trees classified as category A, one tree and one hedgerow classified as category B, and three trees classified as category C. There are three category A trees which impacts the design proposal – all are scheduled for retention and the impact is not considered as significant; for the remaining trees and hedgerow, there is no impact from the design proposal. The application considers all trees and hedgerows located on or within influencing distance of the proposed development area.

5.2.2 T1, (Oak, *Quercus robur* – category A), is a mature specimen located at the front of the garden of the existing dwelling at The Fords and as such is unaffected by the proposed development works. A significant amount of T1's RPA is covered by existing incursions, (internal hard standing and the tarmac roadway of Bonfire Hill). T1 is a remarkable example of species. T1 is scheduled for retention.

5.2.3 T2, (Oak, *Quercus robur* – category B), is a mature specimen located at the front of the garden of the existing dwelling at The Fords and as such is unaffected by the proposed development works. A significant amount of T2's RPA is covered by existing incursions, (internal hard standing and the tarmac roadway of Bonfire Hill). T2 is a satisfactory example of species. T2 is scheduled for retention.

5.2.4 T3, (Liquidambar / Sweetgum, *Liquidambar stryraciflua* – category A), is a juvenile specimen located within the garden of the existing dwelling at The Fords. T3 is unaffected by the proposed development works. T3 is a remarkable example of the species. T3 is scheduled for retention.

5.2.5 H1, (Beech; Hazel, *Fagus sylvatica; Corylus avellana*– category B), is a semi-mature

hedgerow demarcating the boundary between the garden of the existing dwelling and the wooded area to the west. H1 acts as a screen, also. H1 is a satisfactory example of the 2 species. H1 is scheduled for retention.

5.2.6 T4, (Ash, *Fraxinus excelsior* – category C), is a mature specimen located within the wooded area. T4 has a significant wound at approx 0.5m to 2m AGL, consistent with scorching from bonfire; it is also somewhat colonised by Ash Dieback, *Hymenoscyphus fraxineus*, ('ADB'). T4 is an unremarkable example of the species. T4 is scheduled for retention.

5.2.7 T5, (Ash, *Fraxinus excelsior* – category C), is a mature specimen located within the wooded area. T5 is an unremarkable example of the species. T5 is scheduled for retention.



5.2.8 T6, (Ash, *Fraxinus excelsior* – category C), is a mature specimen located within the wooded area. T6 is significantly colonised by ADB. T6 is an unremarkable example of the species. T6 is scheduled for retention.

5.2.9 T7, (Oak, *Quercus robur* – category A), is a semi-mature specimen located within the wooded area. T7 is a remarkable example of the species. T7 is scheduled for retention.

5.2.10 T8, (Oak, *Quercus robur* – category A), is a semi-mature specimen located within the wooded area. T8 is a remarkable example of the species. T8 is scheduled for retention.

5.2.11 T9, (Oak, *Quercus robur* – category A), is a mature specimen located within the wooded area. T9 is a remarkable example of the species. T9 is scheduled for retention.

5.2.12 T10, (Oak, *Quercus robur* – category A), is an overmature specimen located within the wooded area. T10 is a remarkable example of the species. T10 is scheduled for retention.

5.2.13 T11, (Oak, *Quercus robur* – category A), is a mature specimen located within the wooded area. T11 is a remarkable example of the species. T11 is scheduled for retention.

5.2.14 T12, (Oak, *Quercus robur* – category A), is a mature specimen located within the wooded area. T12 is a remarkable example of the species. T12 is scheduled for retention.

5.2.15 T13, (Oak, *Quercus robur* – category A), is a mature specimen located within the wooded area. T13 is a remarkable example of the species. T13 is scheduled for retention.

5.2.16 T14, (Hawthorn, *Crataegus monogyna* – category A), is an over-mature specimen located on the northern section of the Site's western boundary. A small portion of the RPA of T14 impacts the proposed development; this amounts to approximately 5% of the RPA. T14 is a remarkable example of the species. T14 is scheduled for retention.

5.2.17 T15, (Oak, *Quercus robur* – category A), is a mature specimen located on the northern section of the Site's western boundary. A small portion of the RPA of T13 impacts the proposed development; this amounts to approximately 5% of the RPA. T13 is a remarkable example of the species. T13 is scheduled for retention.

5.2.18 T16, (Sycamore, *Acer pseudoplatanus* – category A), is a juvenile specimen located on the northern boundary of the Site. T15 is a remarkable example of the species. T15 is scheduled for retention.

5.2.19 T17, (Oak, *Quercus robur* – category A), is a mature specimen located on the northern boundary, with 50% of T15's RPA located in the garden of the existing dwelling at The

Fords. T16 is a remarkable example of the species. T16 is scheduled for retention.

5.2.20 The location of each tree / group of trees and their associated constraints including canopy spread and root protection areas are illustrated on the Tree Constraints Plan at Appendix 2.

*Table 2: Summary of Trees Surveyed*

| Retention Category | Individual Trees | Groups | Hedges | Totals |
|---|---|---|---|---|
| **Category A** (Trees of high quality with an estimated life expectancy of at least 40 years). | 13 | 0 | 0 | 13 |
| **Category B** (Trees of moderate quality with an estimated life expectancy of at least 20 years) | 1 | 0 | 1 | 2 |
| **Category C** (Trees of low quality with an estimated life expectancy of at least 10 years, or young trees with a stem diameter below 150mm). | 3 | 0 | 0 | 3 |
| **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). | 0 | 0 | 0 | 0 |
| Totals | 17 | 0 | 1 | 18 |



5.2.21 It should be noted that Table 1 of BS5837:2012 only gives recommendations in relation to remaining years. A tree may be considered to have a longer remaining life, however, still be considered to be of a lower category given its maturity, condition or overall impact to the application site.

5.2.22 In line with BS5837:2012, category A and B trees / groups of trees are considered as providing a substantial contribution to a site. Therefore, Category A and B trees should be retained and incorporated into the proposed development where possible and feasible.

5.2.23 Generally, category C and U trees / groups of trees are considered to be of low quality or are young specimens, which can be readily replaced, therefore, should not be considered a constraint to future development.

5.2.24 Retention of trees is considered desirable, wherever possible, as it ensures continuity of tree cover and provides a mature landscape to the proposed development.

## 6.0 Impact Appraisal

### 6.1 Overview

6.1.1 BS 5837:2012 provides a methodology for determining the above and below ground constraints presented by trees on and adjacent to the site. The RPA and canopy spreads of all trees and groups are shown in Appendix 1, (Tree Survey Schedule), and Appendix 2, (Tree Constraints Plan).

6.1.2 The Arboricultural Impact Assessment considers the development proposals and how they relate to the trees on the site. Any tree and design conflicts are highlighted, and possible remedial action suggested if appropriate. The proposed design is shown on the Tree Constraints Plan and Tree Removal and Protection Plan, (Appendix 2).



### 6.2 Tree Removal

6.2.1 The current outline design plan does not require the removal of any trees.

## 7.0 Below Ground Constraints

### 7.1 Root Protection Area

7.1.1 The below ground constraints are generally summarised as the root protection areas (RPAs). The RPA is an area equivalent to a circle with a radius of 12 times the diameter of the trees measured at 1.5 metres for single-stemmed trees. For trees with more than one stem, one of the two calculation methods should be used where there are either 2 - 5 stems or 5 or more stems. In all cases, the stem diameter(s) should be measured in accordance with Annex C, and the RPA should be guided from Annex D of BS5837:2012.

7.1.2 The RPA is an area in which no ground works should be undertaken without due care in relation to the retained tree(s) and this is to avoid direct damage to the underground sections of the tree, (its roots), soil compaction, changes in levels or soil contamination which could alter the trees condition and / or stability. The shape of the RPA and its exact location will depend upon arboricultural considerations and ground conditions.

7.1.3 The RPA for the trees and groups of trees have been calculated as prescribed by BS5837:2012 and are shown as circles or polygons on the Tree Constraints Plan at Appendix 2. These plans illustrate the relationship between the RPAs associated with the trees and the proposed development.

7.1.4 In addition to the illustration of RPAs on the plans at Appendix 2, the numerical RPA values are provided within the Tree Schedule at Appendix 1. Within the schedule both RPA radius in metres from the main stem and total area for the RPA as square metres are shown.

7.1.5 Following the proposed tree removals there are two areas where the design proposal is constrained by the RPAs of retained trees.

7.1.6 The proposed construction of the parking area for one of the new dwellings, (plot 2), encroaches on the RPA of T14. This new incursion is estimated to be less than 5% of the total RPA. This therefore meets the recommendations in the British Standard document

BS:5837, section 7.4.2.3, "*New permanent hard surfacing should not exceed 20% of any existing unsurfaced ground within the RPA*"

7.1.7 The proposed construction of a roof canopy for one of the new dwellings, (plot 2), require the siting of a supporting pillar in the RPA of T15. This new incursion is estimated to be less than 5% of the total RPA. This therefore meets the recommendations in the British Standard document BS:5837, section 7.4.2.3, "*New permanent hard surfacing should not exceed 20% of any existing unsurfaced ground within the RPA*"



## 7.2 Existing RPA Incursions

7.2.1 There are existing incursions into the RPAs of 4 retained trees: T1 – T4. All these existing incursions are existing landscaping features, such as hard standing within the Site and the tarmac of Bonfire Hil.

## 7.3 New RPA Incursions required to implement the design proposal

7.3.1 In order to implement the design proposal new incursions are required into the RPAs of T14 and T15, (see sections 7.1.6 and 7.1.7., above)

7.3.2 The area of RPAs where new incursions are required is less than 5% in both instances. This therefore meets the recommendations in the British Standard document BS:5837, section 7.4.2.3, "*New permanent hard surfacing should not exceed 20% of any existing unsurfaced ground within the RPA*".

## 7.4 Proposed demolition works & level changes within the RPAs

7.4.1 In order to implement the design proposals, there are no demolition works, or level changes required within the RPA of any retained tree.

## 7.5 Proposed construction of the 2 new dwellings

7.5.1 The construction of the 2 new proposed dwellings, parking areas and driveways impacts the RPAs of retained trees T14 & T15, as detailed above in sections 7.1.6 and 7.1.7.

7.5.2 The area of RPAs where new incursions are required is less than 5% in both instances. This therefore meets the recommendations in the British Standard document BS:5837, section 7.4.2.3, "*New permanent hard surfacing should not exceed 20% of any existing unsurfaced ground within the RPA*".

## 7.6 Construction scaffolding

7.6.1 In order to construct the new dwelling, there may be a requirement to site scaffolding within sections of the RPA of T15. Should this be required, scaffolding can be erected by siting the feet within the RPA on weight dissipating, temporary ground protection areas, to ensure there is no compaction to those areas within the RPA of the retained tree. The detailed design of these and their installation methodology can be described in a detailed

Arboricultural Method Statement, ('AMS'). The LPA could order this report be produced its methodologies followed as part of a planning condition, post-permission stage of the process.

## 7.7 Infrastructure

7.7.1 Due to the details provided for this application there is insufficient information relating to below ground infrastructure available at present to comment. If services need to enter RPAs the use of hand digging as detailed in the National Joint Utilities Group publication 'Guidelines for the Planning, Installation and Maintenance of Utility Services in Proximity to Trees' (NJUG 10, Volume 4, 2007) will be undertaken to minimise the impact on the tree roots.



## 8.0 Above Ground Constraints

8.1.1 The above ground constraints predominantly refer to the impact of the canopy of any retained tree on the Site either by size and form, shadowing and nuisance factors. As a result, it is sometimes required that a canopy protection zone is established to ensure it is not harmed during construction.

8.1.2 In order to implement the design proposals there are constraints imposed by the canopy of one retained tree, T10. Outer sections of T10's northern canopy overhang the access driveway to the westernmost new dwelling. T10's canopy is 3m AGL, at its lowest point. Therefore, there is potential for this to constrain the construction of this access driveway. Care should be taken when installing this access driveway and any temporary haul route utilised for the construction phase of the development should be routed away from the canopy of T10. This constraint, and strategies to mitigate its impact, are detailed in the draft Arboricultural Method Statement, ('AMS', section11, below).

8.1.3 Where the current and / or ultimate height of a Category A, B or C tree will cause an obstruction to the proposed development, this must be considered as a constraint. This is usually considered in terms of issues relating to shade and light. There are no above ground constraints posed by retained trees on the proposed development in this regard, due to the positioning of the new dwellings centrally within the grassed area and because of the passage of the sun. The position of the retained trees in relation to the sun's passage means the shading will be away from the position of the new dwellings.

## 8.2 Impact on Amenity

8.2.1 As there are no tree removals required to implement the design plan, there is no impact on amenity.

## 8.3 Future Growth

8.3.1 The future growth of the trees may have an impact on proposed new developments. The retained trees which will be close to the new dwellings are either mature specimens or less mature specimens growing adjacent to mature or overmature specimens. This means that

future growth will not be greater than the existing growth of these or the adjacent trees. As such, there will be no change in the overall size of retained trees close to the new dwellings, and therefore future growth is not a constraint.

## 8.4 Leaves, Fruit and Honeydew

8.4.1 The leaves of retained trees will have little or no impact on the site or its users as there are no trees directly overhanging or close enough to the position of the new dwellings for there to be an impact.

8.4.2 Honeydew is most likely to be a significant problem from lime and maple trees, (though not Japanese Maples) – therefore there is no impact on the site or its users.



## 9.0 Conclusions

9.1.1 This tree assessment and AIA is prepared in relation to the full planning application and includes trees, T1 – T17 and H1.

9.1.2 Wherever possible trees / hedgerows should be retained. In terms of the current site layout plan, there is conflict with two trees, T14 & T15.

9.1.3 In order to implement the design proposal there are no requirements to fell / remove any tree or hedgerow.

9.1.4 In order to implement the design proposals there are new incursions of approximately 5% into the RPA of two retained trees, T14 & T15, however the recommendations of BS:5837 concerning new permanent incursions into RPAs of retained trees, (section 7.4.2.3), are met.

9.1.5 In order to implement the design proposal there is a possibility that the canopy of T10 may act as a constraint, insofar as care may need to be taken when installing the access roadway to the westernmost new dwelling, (plot 2). Any potential impact to the canopy of T10 is mitigated by following the methodologies set out in the draft AMS, (section 11, below).

## 10.0 Recommendations

10.1 The installation of tree protective fencing must occur prior to commencement of operations. This will ensure conflict with retained trees does not occur.

10.2 Any unplanned incursions into the RPAs of retained trees must be immediately reported to the Project Arboriculturalist, who will attend the site to assess the potential impact of the unplanned incursion and decide whether to notify the Local Authority's specialist / Arboriculturalist.

10.3 No plant or machinery is to be used within 5m of any retained tree's root / stem junction.

10.4 The successful retention of those trees that remain on the Site is dependent upon the quality and maintenance of any protection system that is put in place. A detailed AMS may be

Required by the LPA to demonstrate how the necessary tree protection strategies will be implemented and proposed mitigations will be effective.

10.5 An indicative draft Tree Retention and Protection Plan ('TRPP', at Appendix 2) is provided; however, this is subject to alteration following a final decision notice and, if deemed necessary by the LPA, a detailed AMS.

10.6 It is critical that all protective fencing is installed and erected, and the Construction Exclusion Zone, (CEZ), enforced prior to the commencement of any works on the Site. Following installation of tree protection, a Site meeting with the LPA's Tree Officer may be considered necessary to ensure satisfaction of all parties prior to any on-Site works commencing.



10.7 It is recommended that a suitable competent arboriculturist undertakes the site supervision and monitoring works – and be recognised as the Project Arboriculturalist.

10.8 In order for tree and root protection measures to work effectively all personnel associated with any demolition and construction processes must be familiar with the Tree Protection and Retention Plan.

## 11.0 Outline Arboricultural Method Statement

### 11.1 Scope of works

11.1.1 Installation of Tree Protection Fencing –

I. Tree Protection Fencing is to be installed along the yellow dashed line, as shown in the Tree Retention and Protection Plan, (see Appendix 2). This will encompass canopy protection fencing for T10.

II. Tree Protection Fencing is to be installed before any materials or machinery are brought onto the site, and before any demolition, excavation and development occurs. Once installed tree protection fencing is not be removed or altered without prior recommendation by the project arboriculturist and, where necessary, approval from the local planning authority.

III. Tree Protection Fencing is to be fit for the purpose of excluding construction activity and appropriate to the degree and proximity of work taking place around the retained tree/s / groups of trees. Barriers are to be maintained to ensure that they remain rigid and complete – for compliant specification of tree protection fencing, see Appendix 3.

IV. Signs indicating the purpose of the fencing must be fixed to it and remain in situ for the duration of the proposed development.

V. The areas within or beyond the tree protection fencing are designated as a Construction Exclusion Zone, (CEZ), where all demolition and construction activity is excluded, including storage of materials harmful chemicals, spoil or aggregates.

## 11.2 Phasing of works

11.2.1 Trees works associated with this mitigation project shall occur in the following order.

*Table 4: Phasing of works*

| Timescale | Task | Responsibility |
|---|---|---|
| Pre-development | Erection of protective barriers as agreed and approved | To be arranged by developer, with sign of from project arboriculturalist |
| Pre-development | Carry out supervisory visit or remote inspection, (and report findings and recommendations if necessary / required) | To be arranged by developer, with sign off from project arboriculturalist |
| During demolition and construction phases of development | Carry out supervisory visits or remote inspections as agreed, (and report findings and recommendations if necessary / required) | To be arranged by developer, with project arboriculturalist |
| Post development | Phased removal of protective barriers | To be arranged by developer, with sign off from project arboriculturalist |
| Post development | Inspect retained / replanted trees and carry out remedial tree work, (if necessary) | To be arranged by developer, with sign off from project arboriculturalist and operations undertaken by arboricultural contractor, if required. |



## 11.3 Arboricultural supervision

11.3.1 A pre-commencement meeting, (either in person or remotely, via suitable digital media), is to be held between the contractors and the project arboriculturist. The LPAs arboricultural officer is to be given reasonable notice of the pre-commencement meeting so they may also attend. The purpose of the pre-commencement meeting shall be:

- To clarify the tree protection methodology with the site manager.
- To sign off that the tree protection barriers have been installed in the correct locations and to the agreed specification.

11.3.2 If significant root growth is disturbed during demolition / construction activities that are not within the scope of this report, the work must cease until the project arboriculturist is consulted. Roots greater than 25mm in diameter or dense / matted fibrous roots are considered significant root growth. It must be remembered that whilst RPAs are part of industry best practice, tree root growth is influenced by a number of factors and may not conform to expected ideals.

11.3.3 No machinery, materials or temporary site buildings are to be stored within the RPAs of any retained trees or hedgerows, unless it is on the pre-existing hard surfacing.

11.3.4 No corrosive materials or chemicals which dissolve in water are to be stored within the RPAs of any retained trees.

11.3.5 If at any time during the demolition / construction process, damage is inadvertently caused to a tree or hedgerow, the project arboriculturist must be notified to assess the likely implications and to prescribe potential remedial measures. Damage can be in the form of chemical or fuel spillage, mechanical damage to either the above ground parts of the tree or the roots, fire or any other unforeseen circumstance.



## 11.4 Detailed Arboricultural Method Statement, (AMS)

11.4.1 The LPA may consider the submission of a detailed AMS is required in order to assist in the protection of retained at the Site during the construction phase of the proposed development. Should this be applicable, it can be required as part of a condition for the granting of planning permission.

## 12.0 References

11.1.1 British Standard 5837:2012 'Trees in Relation to Design, Demolition and Construction - Recommendation'.

11.1.2 British Standard 3998:2010 ‘Tree work – Recommendations’.

11.1.3 BS8545:2014 Trees: ‘From nursery to independence in the landscape – Recommendations’.

11.1.4 The Forestry Act 1967.

11.1.5 The Town and Country Planning Act 1990.

11.1.6 The Town and Country Planning (Tree Preservation) (England) Regulations 2012.

11.17 APN 12, Through the Trees to Development, Arboricultural Advisory and Information Service. Derek Patch and Ben Holding.

## 13.0 Appendices:

Appendix 1: Schedules
Appendix 2: Plans
Appendix 3: Tree Protection
Appendix 4: Screenshots relevant to the proposed development
Appendix 5: Report Limitations
Appendix 6: Arboricultural Survey: methodologies
Appendix 7: Summary of author's qualifications and experience

## Appendix 1: Schedules

## Schedule 1: Cascade chart for tree quality assessment:

**Table 1 - Cascade Chart for Tree Quality Assessment**

| Category and Definition | Criteria (including subcategories where appropriate) | | | Identification on Plan |
|---|---|---|---|---|
| **Category U**<br><br>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);<br>▪ Trees that are dead or are showing signs of significant, immediate, and irreversible overall decline; and/or<br>▪ 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<br>*NOTE: Category U trees can have existing or potential conservation value which it might be desirable to preserve; see 4.5.7* | | | Dark Red |
| **Trees to be considered for retention** | | | | |
| | **1 Mainly arboricultural qualities** | **2 Mainly landscape qualities** | **3 Mainly cultural values, including conservation** | |
| **Category A**<br><br>**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 semiformal 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). | Light Green |
| **Category B**<br><br>**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. | Mid Blue |
| **Category C**<br><br>**Trees of low quality** with an estimated remaining life expectancy of at least 10 years, or young trees with a stem diameter below 150mm | 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. | Grey |

## Schedule 2: BS:5837 Tree Survey:

**Client Name:** Paula Rixon
**Site:** Land at The Fords, Southwater, West Sussex, RH13 9BU
**Tags:** n / a
**Ref:** Full planning application

**Consultant:** N. Eddison
**Survey Date:** 05.02.2025

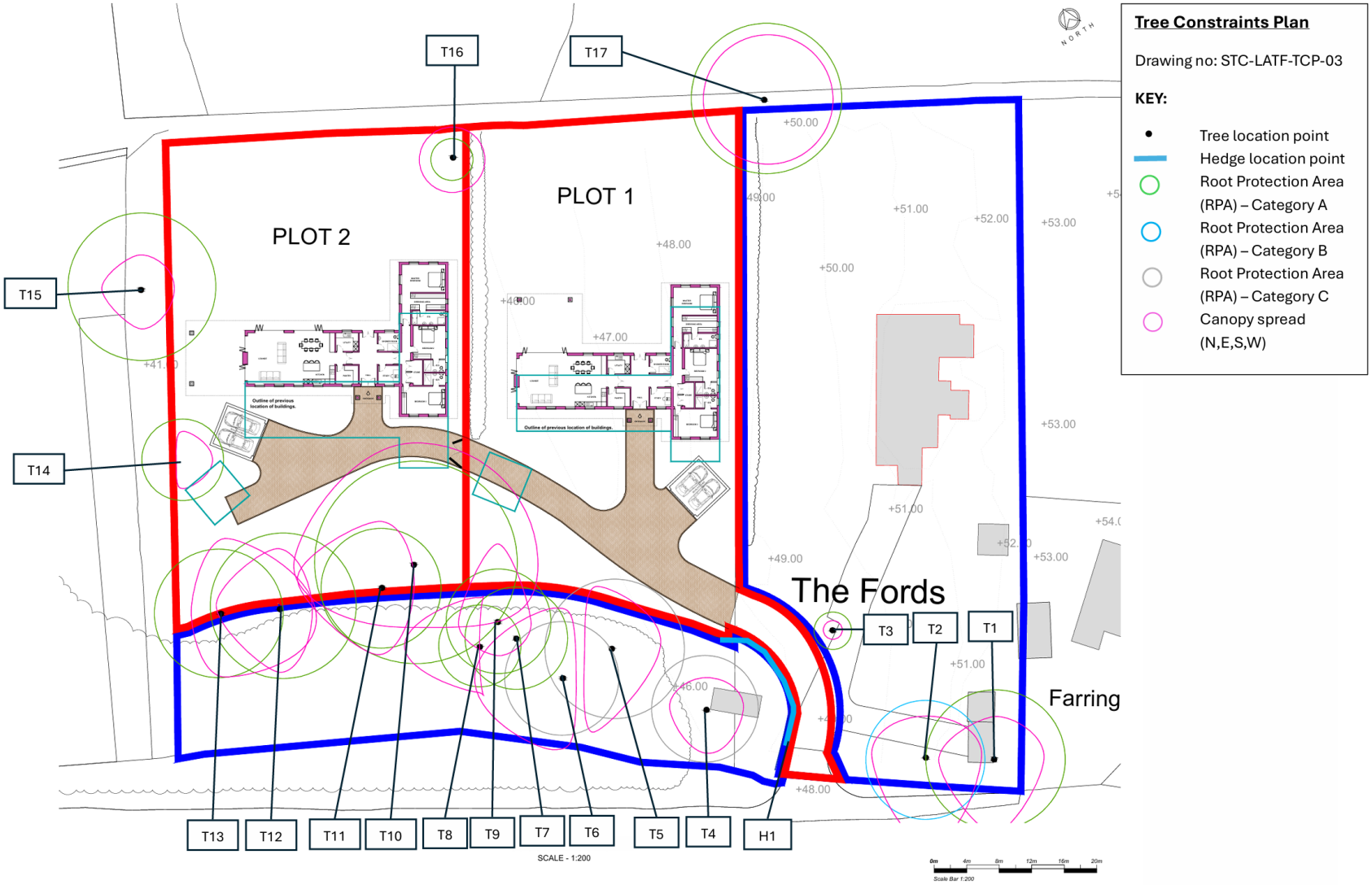
| Tree No. | Species | Common name | W3W Location Reference | Height (m) | DBH (mm) | Crown Spread (North | Crown Spread (East) | Crown Spread (South | Crown Spread (West) | Crown Height A | Root Protection Area Radius (m) | Root Protection Area (m²) | Age | Bat habitat potentia | Condition | Risk | Category | Remedial Recommendations |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| T1 | *Quercus robur* | Oak | motive.firebird.hazlenuts | 24.5 | 686 | 5 | 6 | 10 | 7 | 4.5 | 8.23 | 212.89 | Mature | Medium | Good | Low | A1 | NWR |
| T2 | *Quercus robur* | Oak | bathtub.treatable.bikes | 22 | 605 | 5 | 7 | 11 | 5 | 4 | 7.26 | 165.59 | Mature | Medium | Fair | Low | B1 | NWR |
| T3 | *Liquidambar stryraciflua* | Liquidambar/ Sweetgum | officers.flagpole.apron | 4.5 | 179 | 1.5 | 1.5 | 1.5 | 1.5 | 0.5 | 2.15 | 14.50 | Juvenile | Low | Good | Low | A1 | NWR |
| H1 | *Fagus sylvatica; Corylus avellana* | Beech; Hazel | n/a | 3 | 75 | 1.5 | 1.5 | 1.5 | 1.5 | 0 | 0.90 | 2.54 | Semi-mature | Low | Good | Low | B2 | NWR |
| T4 | *Fraxinus excelsior* | Ash | blown.uplifting.tube | 28.5 | 561 | 4 | 5 | 6 | 5 | 10 | 6.73 | 142.38 | Mature | Medium | Poor | Low | C1 | NWR |
| T5 | *Fraxinus excelsior* | Ash | speak.object.pollution | 31 | 717 | 7 | 8 | 11 | 6 | 11 | 8.60 | 232.57 | Mature | Medium | Fair | Medium | C1 | NWR |
| T6 | *Fraxinus excelsior* | Ash | swatting.founders.octagon | 28 | 628 | 9 | 2 | 10 | 10 | 16 | 7.54 | 178.42 | Mature | Medium | Fair | Medium | C1 | NWR |
| T7 | *Quercus robur* | Oak | obstinate.kebab.tortoises | 26.5 | 527 | 4 | 8 | 5 | 4 | 1.5 | 6.32 | 125.64 | Semi-mature | Medium | Good | Low | A1 | NWR |
| T8 | *Quercus robur* | Oak | signified.pavement.review | 26 | 427 | 6 | 0 | 7 | 9 | 4.5 | 5.12 | 82.48 | Semi-mature | Low | Good | Low | A1 | NWR |
| T9 | *Quercus robur* | Oak | boils.scoping.crunching | 26 | 520 | 9 | 4 | 4 | 5 | 3 | 6.24 | 122.33 | Mature | Medium | Good | Low | A1 | NWR |
| T10 | *Quercus robur* | Oak | workbench.land.flagging | 25.5 | 1062 | 15 | 15 | 8 | 15 | 2 | 12.74 | 510.22 | Over-mature | Medium | Good | Medium | A1 | Remove major deadwood from tree's crown |

# Arboricultural Impact Assessment (BS:5837)

| Tree No. | Species | Common name | W3W Location Reference | Height (m) | DBH (mm) | Crown Spread (North | Crown Spread (East) | Crown Spread (South | Crown Spread (West) | Crown Height A | Root Protection Area Radius (m) | Root Protection Area (m²) | Age | Bat habitat potentia | Condition | Risk | Category | Remedial Recommendations | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| T11 | *Quercus robur* | Oak | soonest.lads.bedroom | 27.5 | 652 | 8 | 4 | 9 | 10 | 2 | 7.82 | 192.31 | Mature | Low | Good | Low | A1 | NWR | |
| T12 | *Quercus robur* | Oak | generated.cluttered.minute | 23 | 770 | 8 | 4 | 8 | 8 | 6 | 9.24 | 268.22 | Mature | Medium | Good | Low | A1 | NWR | |
| T13 | *Quercus robur* | Oak | dream.proudest.priced | 24.5 | 664 | 10 | 9 | 7 | 4 | 2 | 7.97 | 199.46 | Mature | Medium | Good | Low | A1 | NWR | |
| T14 | *Crataegus monogyna* | Hawthorn | property.deflation.unscathed | 15 | 416 | 4 | 4 | 4 | 1 | 2.5 | 4.99 | 78.29 | Over-mature | Low | Fair | Low | A1 | NWR | |
| T15 | *Quercus robur* | Oak | sampled.query.raves | 17 | 794 | 4 | 4 | 5 | 5 | 2 | 9.53 | 285.20 | Mature | Medium | Good | Low | A1 | NWR | |
| T16 | *Acer pseudoplatanus* | Sycamore | backpack.dreamer.clarifies | 6.5 | 225 | 4 | 4 | 4 | 4 | 1.5 | 2.70 | 22.90 | Juvenile | Low | Good | Low | A1 | NWR | |
| T17 | *Quercus robur* | Oak | songs.masterful.widgets | 22.5 | 802 | 8 | 8 | 8 | 8 | 1 | 9.62 | 290.98 | Mature | Medium | Good | Low | A1 | NWR | |

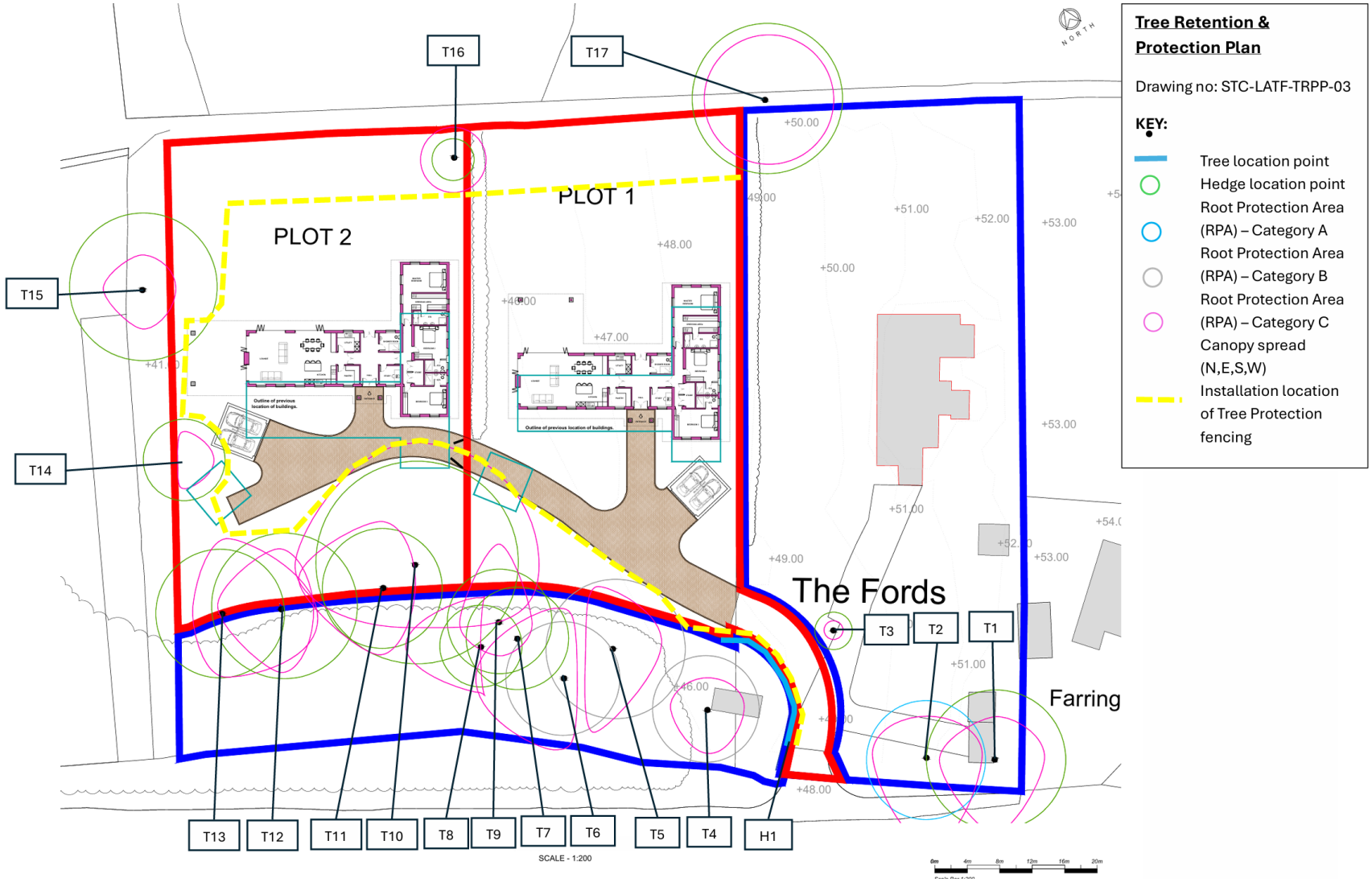
20

## Appendix 2: Plans – Tree Constraints Plan:




Land at The Fords, Bonfire Hill, Southwater, West Sussex, RH13 9BU

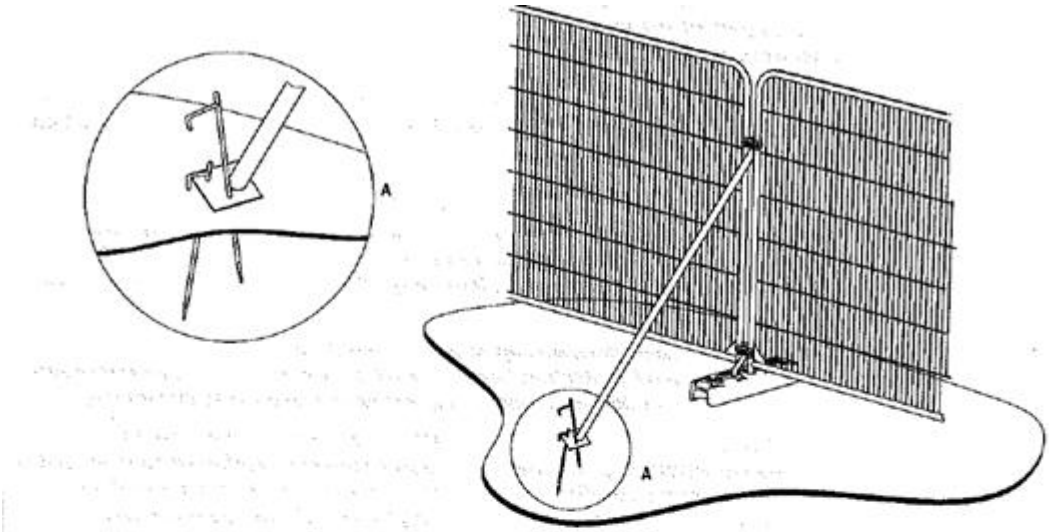
## Appendix 2: Plans – Tree Retention and Protection Plan:



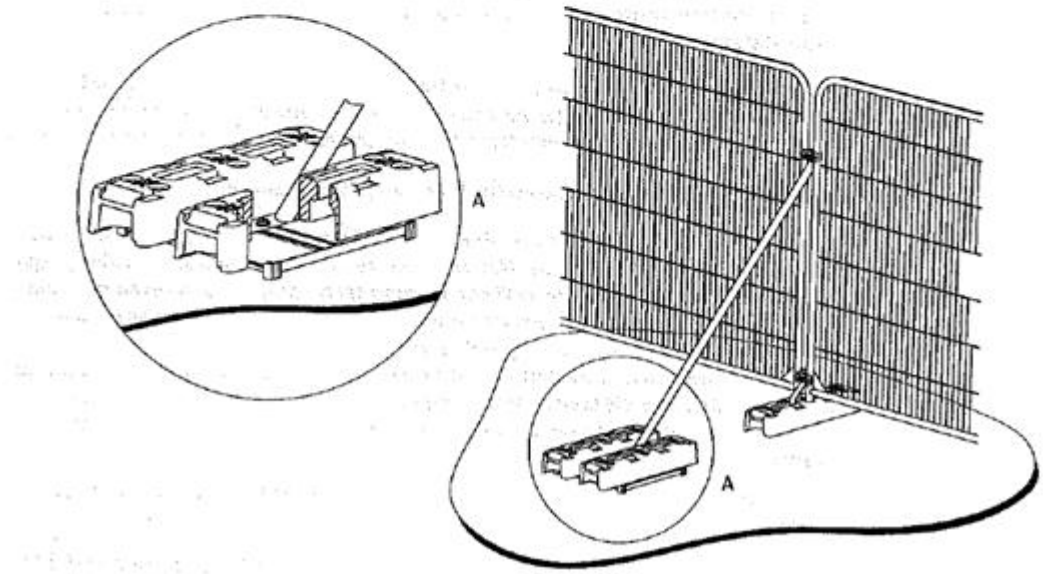
## Appendix 3 Tree Protection:

**Tree Protection Fencing – specifications:**

BS5837 Recommended protective barrier (Fence A-Herras type fence)




a) Stabilizer strut with base plate secured with ground pins

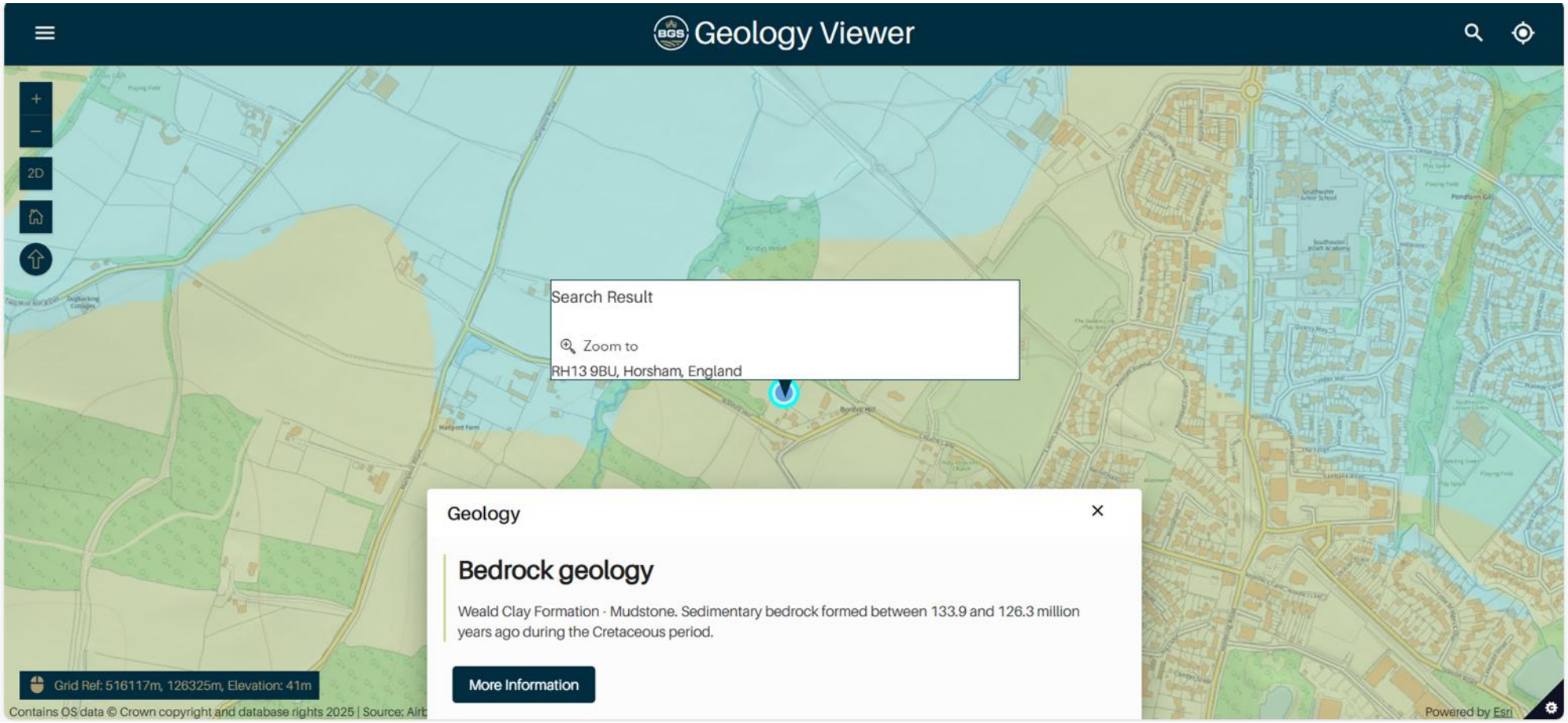



b) Stabilizer strut mounted on block tray

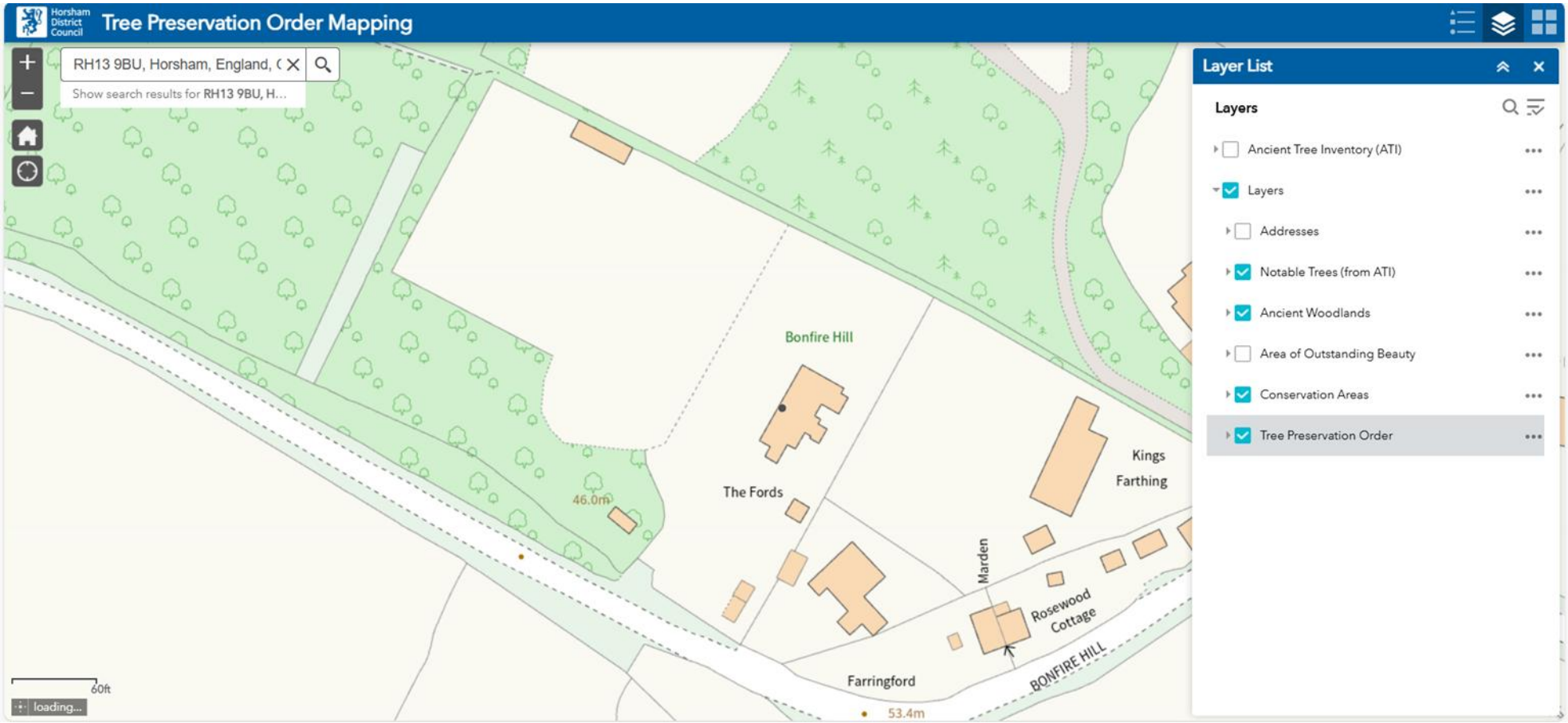
**Tree Protection Fencing – signage:**

## Appendix 4: Screenshots relevant to the proposed development:

BGS Underlying Geology:



Local Planning Authority's Tree Protection Screenshot:




Land at The Fords, Bonfire Hill, Southwater, West Sussex, RH13 9BU

## Appendix 5: Report Limitations, (1.5.2 – 1.5.19)

1.5.2 The observations, assessments and analyses made are valid from the time of inspection. These, and any recommendations made, are subjected to the timescales detailed elsewhere in this report, applicable from time of surveying.

1.5.3 This is an arboricultural report and as such no reliance should be given to comments relating to buildings, engineering or soil.

1.5.4 This is not an arboricultural health and safety survey, a more detailed survey of internal decay detection etc. can be supplied but would be subject to a further fee.



1.5.5 This is a report which accompanies a planning application and provides no detail specifically in relation to the health and safety of the trees.

1.5.6 This report does not comment on the effects of surveyed trees in relation to any issues of subsidence or heave.

1.5.7 The analysis of the tree's / trees' status and assessments of condition, (in this report), are valid for 12 months from the date of site-survey. Any appraisals, and conclusions based thereon, will be invalidated and need reviewing in the event of material change/s to the site or site usage which result in any impact to the trees, (including their rooting zones), from the time of site-surveying, however minor. Consultation with The Sussex Tree Company, (STC), will be necessary, for clarification purposes, if there is any doubt as to whether any such changes materially affect the trees.

1.5.8 Formal assessment of topography, drainage, service conduits, soil conditions and the like are outside the scope of this report. Topographical surveying for the development project has not been undertaken, as far as the author is aware. Existing and proposed Site plans were provided to STC by DMA Building Designs Ltd.

1.5.9 Other specialist arboricultural surveys (e.g., root collar examination or sonic tomography) have not been made and are beyond the scope of this report.

1.5.10 Specific laboratory investigations of soil properties (plasticity index, moisture content, suction pressure) have not been made and are beyond the scope of this report.

1.5.11 Where further inspections of particular trees, (or features), are made as recommendations in this report, an additional or updated report must be submitted following these inspections; either as a new report or part of a re-edit of the comprehensive report. The findings for the re-inspected trees are ***only*** valid for 12 months from the time of re-inspection. Any inspections are chargeable.

1.5.12 Trees are growing dynamic structures. Whilst reasonable effort is made to identify defects within the trees inspected, no guarantee can be given as to the absolute safety or otherwise of any individual tree. No tree is ever absolutely safe due to the unpredictable laws and forces of nature. As a result of this, natural failure of intact trees will occur; extreme climatic conditions can cause damage to even apparently healthy trees.

1.5.13 Trees are living organisms and as such are subject to change through the natural occurrence of growth, maturation and senescence – as well as in response to naturally

occurring events outside of human control and influence. When the inspected tree/s experience naturally occurring events materially affecting their status, the findings in this report will be invalidated; re-inspection may be necessary to meet the thresholds for duty-of-care liabilities. Such events can be, (but are not limited to): strong, storm winds; extremely heavy, sustained and unusual rainfall resulting in sustained waterlogging of rooting zones; or heavy, settled snowfall. Any re-inspections are chargeable.

1.5.14 This report will seek to clarify the existence or otherwise of statutory protections on trees for the site and publish findings. However, should any operational works be commissioned as a result of the survey it is incumbent on the contractor undertaking those works to seek clarification from the Local Planning Authority and give any notifications / seek any permissions should protections be in place and not covered by the granting of the proposed project's planning permissions. The LPA, (Horsham District Council), has been contacted to determine whether any statutory protections to trees at the Site exist; their response was that there are no statutory protections to trees at the Site, in terms of TPOs or Conservation Area status, (deduced from interpretation of their online planning constraints checker).



1.5.15 The Wildlife and Countryside Act 1981, as amended by the Countryside and Rights of Way Act 2000 provides statutory protection to birds' nests whilst under construction or in use, and any contents therein. Any species listed in the Conservation of Habitats and Species Regulations 2017, are also protected, (commonly known as 'European Protected Species' – 'EPS'). Some may create habitats within trees. This is particularly relevant to bats as trees and features can provide roosts. All bats and their roosts are protected. Whilst this report does make an assessment to the likelihood or otherwise of bat roosts, this is indicative and cannot be relied upon, as all observations are made from ground level. It is incumbent on any contractor undertaking operational works to trees to ensure appropriate aerial checks are made for EPS before commencement of works with the potential to disturb or destroy a roost.

1.5.16 This is an arboricultural report and therefore does not rely on ecological or archaeological data. If either is commented upon within the report further professional advice should be sought

1.5.17 To achieve the study objectives stated in this report, STC were required to base our conclusions on the best information available during the period of the investigation and within the limits prescribed by our client in the agreement. No investigative method can completely eliminate the possibility of obtaining partially imprecise or incomplete information. Thus, we cannot guarantee that the investigations completely defined the degree or extent of e.g., species abundances or habitat management efficacy described in the report.

1.5.18 

## Appendix 6: Arboricultural Survey – methodologies:

### Arboricultural survey

- On-site analysis follows the VTA practice, developed by Prof. Dr. Claus Mattheck and published by Lonsdale, (VTA: 1999); all observations are made from ground level.
- Assessment uses the guidance for survey requirements and categorisation uses the Cascade Chart for Tree Quality Assessment, (Appendix 1), both taken from BS 5837: 2012. Recorded trees have been given a reference number which can be found within the Tree Survey, and on the supplied drawings.
- Assessment is based around the useful life expectancy of the tree(s) and their condition and their contribution to the amenity value of the environment – categorised using four letters, the values of which are described in Appendix 1, Schedule 1.
- Branch spread, in general, has been measured on four sides together correlating to the compass points: north; east; south; west. Stem diameters are measured at 1.5m above ground.
- Current tree heights have been measured using a HAGLOFF clinometer, except where trees are inaccessible, when measurements will have been estimated, and, if possible, using Pythagoras' theory of trigonometry.
- Where, due to local constraints such as impenetrable vegetation or tree location in private property to which direct access to trees was not possible, field data will have been estimated and referenced in the data with shading, (grey) and an (E) beside the figure.

### Ash die-back disease

- Following reports of ash dieback disease, first reported in 2012 and caused by the fungus *Hymenoscyphus fraxineus,* there is concern over the future health of ash trees in the UK. Any categorisation of ash trees within this survey are based around the condition at the time of surveying and life expectancy in a normal environment.
- Where ash trees are found to have the disease, they will fall into a C or U category, (dependent on contemporary research findings), and be reported to the Forestry Commission, as well as the client.
- More information can be found on the Forestry Commission's web page: http://www.forestry.gov.uk/planthealth

## Glossary / key to interpreting tree survey data sheet

- **Tree/**group **of trees number:** where trees have historic tree-tag numbers attached to their stems, the tag number is used for identification. Where there are not tags, a number is attributed to each tree or group of trees surveyed and corresponds to marked areas on the Tree Location Plan(s).

- **Species:** the botanical and common names for each tree or group of trees is provided.



- **Height:** an estimated height is given in metres; although a clinometer is used, these devices are not infallible. Precise ways to obtain tree height are by either climbing to the highest growth tip and measuring from there to ground level; or to using Pythagoras' theory of trigonometry to mathematically calculate height – however, the Haglöf clinometer STC LLP use estimates within tolerable levels of accuracy.

- **DBH range:** an estimation of the tree's diameter at breast height is given, measured in millimeters and in ranges of 75mm. The typical DBH reading is taken at around 4.5ft or 1.37m AGL – diameters are taken at 'breast height' to avoid potential inaccurate readings at ground level, where buttressing of roots is common for many species.

- **Age Class:** a subjective judgment on the extent of maturation of each tree or group of trees surveyed; each value is based on the report author's knowledge of the particular species of tree in question and is judged against the average length of life for the species in an 'ideal' or 'usual' surrounding environment. The categorisation used is:

    - Newly planted
    - Juvenile
    - Semi-mature
    - Mature
    - Over-mature
    - Veteran
    - Dead specimen

- **Bat Habitat Potential:** an assessment of the tree or its features and the likelihood whether these present a suitable potential habitat for bats or other EPS. The categorisation used is:

    - n/a
    - Low
    - Medium
    - High

- **Condition:** an appraisal of the tree or group of trees present overall structural status and physiological health, as well as any significant pre-existing external environmental impacts. The categorisation used is:

    - n/a
    - Dead
    - Poor
    - Fair
    - Good

- **Risk Rating:** an assessment of the observed hazards presented by the tree/group of trees and associated features, and the categorisation of the severity of risk these present to persons or property. The categorisation used is:

  - Low – potential risk to damage persons or property is within tolerable levels harm is not likely to occur within the next 12-24 months
  - Medium – potential risk to damage persons or property is of a medium likelihood; harm may occur within the next 6-12 months
  - High – potential risk to damage persons or property is of a high likelihood; harm may occur within the next 3-6 months
  - Immediate – potential risk to damage persons or property is immediately likely; harm may occur immanently



- **Remedial recommendations:** enacting the recommendations for work given will mitigate or remove any hazard observed and lower the tree/group of trees' risk rating to tolerable levels; this does not apply where the recommendation given is for further surveying, analysis or investigation – in such instances the report's recommended instructions must be followed and delivered, as if the risk rating for the tree/groups of trees were 'immediate'. Further recommendations made as a result of the re-surveying, assessment, analysis or investigation also must be followed and delivered to lower the tree/group of trees' risk rating to tolerable levels, (any associated timeframes will apply from the date of the re-surveying, assessment or investigation).

- **Abbreviations and glossary:** certain commonly used phrases have been abbreviated for ease of delivering this survey. These are listed below. Certain technical terms used in arboriculture may appear in this report and their precise meaning may not be familiar to 'lay-people', so the author has supplied brief explanations. These are listed in the glossary below:

| | | |
|---|---|---|
| Abbreviations: | NWR – | No works recommended |
| | GL – | Ground level |
| | AGL – | Above ground level |
| | DBH – | Diameter at breast height |
| | VTA – | Visual tree analysis |
| | DOC – | Duty of Care |
| | CODIT – | Compartmentalisation of dysfunction/damage in trees |

Glossary:

Access Facilitation Pruning – *description of an arboricultural operational task* – A one-off tree pruning operation necessary to provide access for operations on site, which, when complete, are without significant adverse impact on tree physiology or amenity value.

Aerial investigation and report – *a description of arboricultural consultancy practice* – to undertake an investigation of aerial sections of a tree, not observable from ground level, using a systematic approach; to analyse structural integrity and any observable features – recommended when the VTA analysis from ground level is incomplete/inconclusive and the consultant has seen a feature/s which require further investigation to decide on a risk-rating and/or works

priority.

Arboriculturalist – *description of professional status* – person who has gained expertise in the field of trees, (with particular refence to construction projects), through relevant education, training and experience.

Arboricultural Impact Assessment (AIA) – *arboricultural consultancy task for trees on development sites* – a study, undertaken by an arboriculturalist, to identify, evaluate and possibly mitigate the extent of direct and indirect impacts on existing trees that may arise as a result of the implementation of any site layout proposal.



Arboricultural Method Statement – *arboricultural consultancy task for trees on development sites* – a document describing the methodology for the implementation of any aspect of development that has potential to result in loss of or damage to a retained or newly installed tree.

Bifurcated – *description of tree architecture* – when a tree has 2 distinct stems.

Cambium/cambial – *description of tree morphology* – the layer of cellular structure immediately behind the bark, where vascular tissues are created.

Cavity – *description of tree morphology* – a feature of a tree's architecture that is an incursion into the interior wood in some way, shape or form, usually formed as a result of a branch tearing away from the tree, pathogenic incursion or animal incursion, (or combination of all of these).

Canker – *description of tree morphology* – an area of bark/wood that exhibits dysfunctional growth patterns, often with localised degradation in structural integrity.

Construction Exclusion Zone – *arboricultural consultancy terminology* – an area based on the RPA where access is prohibited for the duration of the enabling and construction phases of a development project

Crown – *description of tree architecture* – the part of the tree distinct from the roots and stem(s), where most of the tree's leaves are, supported by primary, secondary, tertiary branches and twigs/shoots.

Drop-crotching – *description of arboricultural operational practice* – to prune a tree by selecting branches with terminal growth as the reduction's desired length from crown perimeter.

Epicormic – *description of tree morphology* – a type of branch/shoot growth emergent from adventitious buds or parenchyma tissue present within the layer of wood immediately below the tree's bark, (cambium). These branches attach to the tree's branches/stems in a way that is structurally much weaker than branch attachments made in the normal course of a tree's development.

*Ganoderma applanatum* – *a tree pathogen* – commonly known as the artist's bracket, artist's conk or bear bread. It is a wood-decay fungus that causes rot of the tree's heartwood. Its fruiting bodies are hard brackets that appear white at first and then later brown in colour. https://en.wikipedia.org/wiki/Ganoderma_applanatum

Internal investigation and report – *a description of arboricultural consultancy practice* – to undertake an investigation of the trees internal wood/wood structures using specialist equipment; either a Resistograph drill machine or a tomograph machine. These will give readings that when analysed that can be interpreted by the arboricultural consultant to make judgments about the integrity or otherwise of the tree's internal wood structures and deduce/extract from these the likelihood of failure and/or recommendations to mitigate risks.

*Kretzschmaria deusta* – *a tree pathogen* – commonly known as 'brittle cinder' is a fungus and plant pathogen. It is a 'soft rot', preferentially degrading the cellulose, then later both the cellulose and lignin that make up wood cells. It colonises the lower stem and/or roots of living trees through injuries or by root contact with infected trees. It can result in sudden breakage/complete failure from the root/stem junction in otherwise apparently healthy trees. https://en.wikipedia.org/wiki/Kretzschmaria_deusta

Lesion – *description of tree morphology* – a small area of dysfunctional bark tissue.

Limb – *description of tree morphology* – branch.

Management recommendations – *arboricultural consultancy task for trees surveyed* – comments based on VTA observations, on the condition of the tree, group or woodland and recommendations for future works.

Monolith – *description of arboricultural operational practice* – to partially fell a tree, but leave a designated length, (above ground level), of stem standing; the remaining section is not considered a hazard and will become a site for wildlife habitation.

Re-trenchment pruning – *description of arboricultural operational practice* – crown reduction in late-mature and senescent trees to anticipate or keep pace with decline in the crown.

Root Protection Area, (RPA) – *arboricultural consultancy terminology* – a layout design tool showing the minimum area needed around a tree's stem to protect its subterranean rooting structures so as to maintain the tree's future viability, if left undisturbed.

Root/stem junction – *description of tree morphology* – where the root and the stem join.

Scaffold – *description of tree morphology* – a primary branch; one that

grows directly from the stem and acts as a support for secondary branching

Self-set – *description of a tree's origins* – when the tree has been naturally propagated, in other words, not planted by human agency.

Tree Constraints Plan– *a description of arboricultural consultancy task for trees on development sites* – a scale drawing showing the pre-existing trees, groups of trees and hedges, (and other landscape features), on the site of a proposed development as well as the footprint of the proposed development, thereby illustrating what, if any, constraints the tree-scape imposes.



Tree Protection Plan– *a description of arboricultural consultancy task for trees on development sites* – a scale drawing incorporating finalised design proposals for a development, showing locations and dimensions of retained trees, there RPAs and the location of tree and landscape protection measures; also, the locations of any new trees to be installed, (and any tree and landscape protection measures required for these).

Trifurcated – *description of tree architecture* – when a tree has 3 distinct stems

Union – *description of tree morphology* – a site within the tree's architecture where 2 branches or stems, (or combination of both), originate

Veteran Tree – *arboricultural specific terminology* – a tree that, by recognised criteria, shows up to 4 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. These might be large girth, habitat features, signs of crown retrenchment and hollowing of the stem.

Wound-wood/reaction wood – *description of tree physiology* – a type of wood grown by trees, distinct from wood grown in the usual course of development, and in reaction to a wounding event, as part of the CODIT defense strategy trees have. Wound-wood has greater strength properties than wood grown in the usual course of development.

## Appendix 7: Summary of author's qualifications and experience

The author, Nicholas Eddison, has the following qualifications and experiences and has undertaken CPD as described, below:

### i. Qualifications



BA (Honours): Politics, Philosophy and History, (Birkbeck College, University of London)

Level 4 Diploma in Arboriculture, (Merrist Wood)

LANTRA Professional Tree Inspection Certificate

Arboricultural Association Certificate in Undertaking Aerial Tree Inspections

Named Manager in the Arboricultural Association's approved contractor scheme for a medium/large business

Arboricultural Association Certificate in Risk Assessment for Commercial Arboriculture

Arboricultural Association Certificate in Subsidence Reporting in relation to Trees

Certificate in Bat Awareness Training: compliant with BS: 8596: 2015 – Surveying for Bats in Trees and Woodland

Arboricultural Association Certificate in Assessing Tree Risk – Likelihood of Failure

Arboricultural Association Certificate in Assessment of Tree Forks

NPTC Level 2 Certificates in: Chainsaw Cross-Cutting and Maintenance; Felling and Processing Trees up to 380mm; Tree Climbing and Aerial Rescue; Use of chainsaw from a Rope and Harness
City and Guilds: Signing and Guarding, (Chapter 8)

### ii. Practical/relevant experience

10 years as a practicing Arboricultural Consultant
5.5 years at director level as an Arboricultural Director
Assessor for the Arboricultural Association's Approved Contractor scheme.
Trainer of chainsaw maintenance and cross-cutting at Brinsbury College.
Over 30 years' experience as a practicing Climbing Arborist; in the domestic, commercial and civil arenas.
Over the preceding 10 years the author has undertaken and delivered

multiple Tree Condition Survey Reports; BS:5837 Tree Surveys and Arboricultural Reports in support of planning applications; Aerial Inspection Reports; Subsidence Reports; Resistograph Internal Investigation Reports; Tree Hazard Assessment Report; also worked as Project Arboriculturalist for civil development projects.

### iii. Continuing professional development

The author periodically attends courses and lectures in order maintain his knowledge base and to further his learning and development. Examples of recently attended CPD events:



- Regular CPD sessions required for Assessors of the Arboricultural Association's Approved Contractor scheme.
- Arboricultural Association's seminar on the Approved Consultant scheme
- a training day for AutoCAD and the 'Keytree' application, from Keysoft solutions – September 2019;
- the most recent meeting of TDAG, (Trees in Design Action Group) – September 2019;
- a seminar in morphophysiology of trees at Barcham tree nursery – summer 2019;
- Arboricultural Association's Subsidence Reporting course – Spring 2019;
- Arboricultural Association's Aerial Tree Inspection course – Spring 2019; the
- Arboricultural Association's Business Masterclass – Winter 2019;
- and Claus Mattheck's farewell lecture at Loughborough University in the summer of 2018.

## The Sussex Tree Company:

We are providers of specialist services to the Arboricultural and Development industries in the UK:

**Arboricultural Consultancy:** all requirements are serviced

**Business-to-business advice and assistance for the arboricultural industry:**

- For achieving compliance and award of Arboricultural Association approved contractor status
- For developing efficient and ergonomic business systems
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