

Arboricultural Impact Assessment

SITE LOCATION

1349-1351 Stratford Road, Shirley

ISSUE DATE

11th May 2020

OUR REFERENCE

200507 1083 AIA V1a

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PREPARED FOR

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| Client number | 1083 | | |



Executive Summary

Project Location

This Arboricultural Impact Assessment (AIA) has been commissioned by Five Homes (Shirley) Limited. It is prepared in relation to the Proposed Development at 1349-1351 Stratford Road, Shirley ('the Site') (see aerial photography at Appendix 1). The Site is centred approximately at OS National Grid Reference SP 13923 76412.

Proposed Development

The Proposed Development is to build 7no. residential plots with associated parking and gardens. The Proposed Development includes a new internal road network framing the eastern boundary of the Site.

Results of Survey

This survey and impact assessment include records of 5no. individual trees, 6no. groups of trees and 1no. hedgerow. All trees and groups surveyed were category C. None of the surveyed trees were of category A, B or U retention value. The application considers all trees located on or within influencing distance of the Proposed Development.

Conclusions

In order to implement the Proposed Development, there will be an overall loss of 4no. category C individual trees, 1no. category C group and 1no. category C hedgerow. In addition to this, there will be a requirement for the partial removal of 1no. category C group of trees (collectively known as the 'proposed removals').

The proposed removals are all low-quality trees and as such, their loss will have minimal impact on the amenity value and scene of the surrounding area. The loss of these trees is considered to be acceptable in the context of the Proposed Development and with the recommended mitigation implemented.

As part of the Proposed Development 15no. new trees are proposed to be planted, 5no. at the frontage of the Site, 6no. to be planted centrally within the Site and 4no. to be planted on the northern boundary to enhance G6. Due to the low quality of the trees on-site, the Proposed Development is considered to result in a short-term not significant loss to tree cover, with a mid- to long-term gain; resulting in a net gain in canopy cover and amenity value.

The Proposed Development will result in new incursions to the eastern sides of G2 & G3 where the proposed parking bays will extend beyond the existing hard standing. In order to ensure that these offsite groups are not negatively impacted in the long-term, the proposed parking bays and access road within this area will be constructed upon a 150mm Wrekin ProtectaWeb (see the draft Tree Protection Plan (A004) at Appendix 4 for further information regarding its location and extent).

Recommendations

The removal of existing hard surfacing, foundations and built up ground in RPAs must be undertaken with hand tools only and/or under the direct supervision/guidance of the Arboricultural Clerk of Works.

The successful retention of trees will be dependent upon the quality and maintenance of the protection systems that are put in place. Should the Council be minded to grant planning permission, an Arboricultural Method Statement (AMS) should be conditioned to detail the measures by which retained trees at the Site and offsite will be protected.

An indicative draft tree protection plan (A004 – Appendix 4) has been provided, however, this is subject to alteration following a final decision notice and a detailed method statement.

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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-site. Following installation of tree protection measures, a site meeting will be undertaken with the Tree Officer to ensure satisfaction of all parties prior to any on-site works commencing.

It is recommended that a suitable competent arboriculturist, undertakes the site supervision and monitoring works.

In order for tree and root protection measures to work effectively all personnel associated with the construction process must be familiar with the Tree Protection Plan and subsequent AMS.

It is recommended that planning conditions be adhered to any approval for a suitable tree planting scheme and for the production of an Arboricultural Method Statement for implementation of tree protection, pre-commencement meetings and on-going site supervision.



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1. Introduction

1.1 Terms of instruction

- 1.1.1 The Principal Author of this report is Jack Barnard *BSc (Hons). MArborA, MICFor (Chartered Arboriculturist)* Senior Arboricultural Consultant at Wharton Natural Infrastructure Consultants Ltd. (WNIC). The Principal Author is a Professional Member of the Arboricultural Association (AA) and the Institute of Chartered Foresters (ICF) and is therefore required to uphold the professional and ethical standards within the AA and ICF Code of Conduct. The Principal Author is LANTRA certified to undertake Professional Tree Inspections.
- 1.1.2 This Arboricultural Impact Assessment (AIA) has been commissioned by Five Homes (Shirley) Limited (the Applicant). It has been prepared in relation to the Proposed Development at 1349-1351 Stratford Road, Shirley ('the Site') (see aerial photography at appendix 1).
- 1.1.3 It is appreciated that the trees could provide a constraint and therefore a detailed tree survey and arboricultural report was commissioned to fulfil the requirements of BS5837:2012 *Trees in Relation to Design, Demolition and Construction: Recommendations*. It considers trees directly on-site or within influencing distance of the Site. The instruction is to provide an AIA in order to fulfil the initial requirements of Solihull Metropolitan Borough Council ('the Council'), who require an AIA to make an informed decision on the Applicant's full planning application.
- 1.1.4 The AIA is also intended as a reference point for all site operatives and a copy will remain with the site manager for the duration of the development. This document may be used as a point of reference if there were to be a dispute over compliance with related planning decisions. However, should the Council be minded to grant planning permission, an Arboricultural Method Statement should be conditioned to ensure sufficient protection of retained trees.

1.2 Scope of project

- 1.2.1 The scope of this project is threefold:
- 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 for the Site including Root Protection Areas and canopy spreads.
 - iii. Provide an AIA in relation to the Proposed Development, giving assessment of the trees in relation to the proposal and the potential impacts the trees will have.

1.3 Proposed Development

- 1.3.1 The Proposed Development is to build 7no. residential plots with associated parking and gardens. The Proposed Development includes a new internal road network framing the eastern boundary of the Site.



1.4 Reference documents

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

Table 1 Document and Plans Provided

| Document Description | Reference No. | Prepared By | Date |
|----------------------|---------------|-----------------|----------|
| Topographical Survey | 8796-2 | Site Data Ltd. | May 2020 |
| Proposed Plans | SKE200225 | FB Architecture | May 2020 |

2. Planning Policy and Legislation

2.1 National Planning Policy Framework (NPPF) (February 2019)

2.1.1 When determining planning applications, Local Planning Authority's (LPA) should apply the following principles:

- *Development resulting in the loss or deterioration of irreplaceable habitats (such as ancient woodland and ancient or veteran trees) should be refused, unless there are wholly exceptional reasons and a suitable compensation strategy exists.*
- *Development whose primary objective is to conserve or enhance biodiversity should be supported; while opportunities to incorporate biodiversity improvements in and around developments should be encouraged, especially where this can secure measurable net gains for biodiversity (paragraph 175).*

2.1.2 The trees proposed for removal within this report is neither considered aged or veteran and do not constitute irreplaceable habitats, therefore the principles for refusal within the NPPF would not be considered applicable.

2.2 Tree Preservation Orders and Conservation Areas

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 within a Conservation Area.

2.2.2 It has been confirmed by Mr. Paul Birch of Solihull Metropolitan Borough Council's Planning Department on the 11th May 2020 that there are no TPO's across the Site, nor does the Site fall within a local Conservation Area.

2.3 Relevant wildlife legislation

2.3.1 The Wildlife and Countryside Act 1981 (as amended) and the Conservation of Species and Habitat Regulations 2017 (as amended by The Conservation of Species and Habitat Regulations (Amendment) (EU Exit) Regulations 2019) provides statutory protection of birds, bats and other species that can inhabit trees. The Natural Environment and Rural Communities Act 2006 (Section 41 England and Wales) also places a duty on Local Planning Authorities to consider biodiversity when carrying out their duties.

2.3.2 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 an offence under the above legislation. Where the presence of such species is suspected, the project ecologist or Natural England should be contacted for advice.



2.4 Felling Licence

- 2.4.1 Tree felling is also restricted under the Forestry Act 1967. Under this act, there is an exemption from the need for a felling licence for "*Felling trees immediately required for the purpose of carrying out development authorised by planning permission (granted under the Town and Country Planning Act 1990) ...*"
- 2.4.2 If full planning permission is granted, then any trees which require felling to implement the approved plans are exempt from this statutory protection. Outline planning permission does not provide an exemption to the regulations that control tree felling in the Forestry Act 1967.

2.5 Guidance documents

- 2.5.1 It is appreciated that the trees may form a constraint and therefore a detailed tree survey and arboricultural report was commissioned to fulfil the requirements of BS5837:2012 *Trees in Relation to Design, Demolition and Construction: Recommendations*. It considers trees directly on-site or within influencing distance of the Site.
- 2.5.2 This AIA makes a number of recommendations for the Site in order that those trees retained and protected through the course of development, continue to enhance the environment following its completion.
- 2.5.3 To achieve this a methodology for all proposed works that may affect trees, which are to be retained on and adjacent to the Site has been provided.

3. Site Assessment

3.1 Site visit

- 3.1.1 The tree assessment was undertaken on 30th April 2020 by the *Peter Wharton BSc (Hons) FArborA MICFor (Chartered Arboriculturist)* and the trees inspected from ground level. The weather conditions at the time of the survey were bright and clear and therefore not considered to be a constraint to the assessment.

3.2 Site description

- 3.2.1 The Site comprises the residential property of no. 1349-1351 with their associated driveway and rear gardens (see land within the red line boundary on Appendices 1), known herein as 'the Site'. The Site is centred approximately at OS National Grid Reference SP 13923 76412. Access to the Site can be gained from the southwest off Stratford Road (A34).
- 3.2.2 The Site is bordered immediately to the north and west by the residential rear gardens and properties of Kemerton Way & Bretshall Close. The southern boundary of the Site is bound by Stratford Road (A34) with Shirley Golf Club beyond. The eastern boundary of the Site is framed by a new residential construction site.



4. Arboricultural Assessment

4.1 Method of data collection

- 4.1.1 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 AIA, the design proposal for the Site has been considered.
- 4.1.2 The survey recorded trees either as individual specimens or as groups, where these trees were aerodynamically, culturally or visually important as groups. The tree numbers associated with each tree are cross-referenced within the schedule and plans at Appendix 3 and 4 respectively. The complete method of data collection for the tree survey is provided at Appendix 2.

4.2 Summary of data

- 4.2.1 A total of 5no. individual trees, 6no. groups of trees and 1no. hedgerow have been surveyed. All trees surveyed were Category C trees. None of the surveyed trees were of category A, B or U retention value.
- 4.2.2 A detailed breakdown of trees surveyed with the BS5837:2012 retention category is given in *Table 2* below. The comments for each tree vary and are given in detail in the BS5837:2012 Tree Schedule at Appendix 3.
- 4.2.3 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.
- 4.2.4 In line with BS5837:2012, the category A and B trees should be 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.
- 4.2.5 Generally, category C and U trees are of low quality or are young specimens, which can be readily replaced, therefore, should not be considered a constraint to Proposed Development. However, it is understood that, wherever possible, trees will be retained for the benefits that they currently provide as well as helping to ensure a continuity of tree cover and providing a mature landscape to the Proposed Development.
- 4.2.6 The location of each tree and their associated constraints including canopy spread and root protection areas with and without the Proposed Development are illustrated on plan numbers A001 and A002 both at Appendix 4.



5. Impact Appraisal

5.1 Relationship between site layout and trees

- 5.1.1 In order to implement the Proposed Development, there will be an overall loss of 4no. category C individual trees, 1no. category C group and 1no. category C hedgerow. In addition to this, there will be a requirement for the partial removal of 1no. category C group of trees.

Table 2 Trees to be removed for proposed works.

| Reason for removal | Tree retention category | | | | Total |
|-----------------------------|-------------------------|----------|------------------------------|----------|------------------------------|
| | A | B | C | U | |
| Proposed Development | - | - | T1, T2, T3 & T4 | - | 4 |
| | - | - | G1 | - | 1 |
| | - | - | H1 | - | 1 |
| Partial Removal | - | - | G3 | - | 1 |
| Total | 0 | 0 | 6 + 1 Partial Removal | 0 | 6 + 1 Partial Removal |

- 5.1.2 The proposed removals are all low quality and as such, will have minimal impact on the amenity value and scene of the surrounding area.
- 5.1.3 The removal of G1 (Leyland cypress) and H1 (common hawthorn & common privet), as well as the partial removal of G3 (common ash & sycamore), are the only tree removals visible from the public realm, visible from the A34 to the south. However due to their low arboricultural merit and amenity value, their removal is not considered to have a significant impact on the street scene.
- 5.1.4 As part of the Proposed Development 15no. new trees are proposed to be planted, 5no. at the frontage of the Site, 6no. to be planted centrally within the Site and 4no. to be planted on the northern boundary to enhance G6. Due to the low quality of the trees on-site, the Proposed Development is considered to result in a short-term not significant loss to tree cover, with a mid-to long-term gain; resulting in a net gain in canopy cover and tree amenity value.
- 5.1.5 Full specification of tree removal is provided within the complete Tree Schedule. All trees, which are directly or indirectly impacted upon by the Proposed Development, are illustrated on plan number A002, at Appendix 4.

5.2 Proposed tree works

- 5.2.1 As part of the Proposed Development there is a requirement to prune several trees, as detailed below. All of the proposed pruning works are for category C trees and the pruning works are not considered to impact their amenity value. For further detail please see the Tree Schedule at Appendix 3 and DWG No. A004 at Appendix 4.
- 5.2.2 At the frontage of the Site, there is a requirement to prune the eastern side of G2 (Portugal laurel) & G3 (common ash & sycamore), reducing the canopies back to the boundary, in line with past management. G2 will require reducing 1.5m, while G3 will require a 4m reduction.
- 5.2.3 On the western boundary of the Site, there will be a requirement to prune G4 (cherry laurel & Lawson's cypress) back to the boundary. Only very minor pruning works of less than 0.5m will be required.
- 5.2.4 Towards the northern boundary of the Site, there will be a requirement to reduce the southern



portion of G5 (corkscrew willow & Lawson's cypress). It is proposed that the group is reduced back 2m to be more fitting within the revised garden context.

6. Below Ground Constraints

6.1 Root Protection Area

- 6.1.1 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 12 times the diameter of the trees measured at 1.5 metres for single stemmed trees. The stem diameter(s) should be measured in accordance with Annex C of BS5837:2012, and the RPA should be guided from Annex D of BS5837:2012.
- 6.1.2 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 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.
- 6.1.3 The RPA for the trees has been calculated as prescribed by BS5837:2012 and are shown as pink dashed circles on the Tree Constraints Plan at Appendix 4. These plans illustrate the relationship between the RPAs associated with the trees and the Proposed Development.
- 6.1.4 In addition to the illustration of RPAs on the plans at Appendix 4, the numerical RPA values are provided within the Tree Schedule at Appendix 3. Within the schedule both RPA radius in metres from the main stem and total area for the RPA as square metres.

6.2 Existing RPA incursions

- 6.2.1 A number of the trees to be retained have existing incursions into their RPAs for hard surfacing and buildings. In particular, G2 and G3 have existing RPA incursions from the Site access drive. The RPAs of these groups have not been altered as the existing hard standing is not considered to be acting as a root barrier.

6.3 Proposed demolition within RPAs

- 6.3.1 The Proposed Development will require the demolition of the existing dwellings. Due to the proposed removal of T1 and partial removal of G3, the demolition works will not be located within the RPA of retained trees. The demolition activity should not cause any further damage to these surrounding trees.
- 6.3.2 However, the aforementioned removal of existing hard surfacing, foundations and built up ground in RPAs must be undertaken with hand tools only and/or under the direct supervision/guidance of the Arboricultural Clerk of Works (ACoW).

6.4 New RPA incursion

- 6.4.1 The Proposed Development will result in a new RPA incursion to the eastern side of G2 & G3 where the proposed parking bays will extend beyond the existing hard standing. To ensure that these offsite groups are not negatively impacted in the long-term, the proposed parking bays and access road within this area will be constructed upon a 150mm Wrekin ProtectaWeb. See the draft Tree Protection Plan (A004) at Appendix 4 for further information regarding its location and extent.
- 6.4.2 The successful retention of trees will be dependent upon the quality and maintenance of any protection system that is put in place. Should the Council be minded to grant planning permission, an Arboricultural Method Statement should be conditioned to ensure sufficient protection of retained trees.



6.5 Infrastructure

- 6.5.1 Due to the details provided for this application there is insufficient information relating to below ground infrastructure available at present to comment as to whether or not there would be adequate space for these to be installed outside of RPAs. However, there is sufficient space outside of the RPAs for services to be located. If services do 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.

7. Above Ground Constraints

7.1 Canopy protection zone

- 7.1.1 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.
- 7.1.2 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.
- 7.1.3 An Amenity Clearance Zone (ACZ) is used to consider the impact of the proximity of retained trees to structures. The ACZ is defined as an area surrounding the tree that enables a satisfactory relationship to exist between the property and the tree, and as such is equal to two-thirds of the tree's expected mature height. The ACZ is a combination of factors such as:
- Shading (of buildings and open space)
 - Direct damage to structures
 - Future pressure for removal
 - Seasonal nuisance (e.g. leaf fall blocking gutters, fruit fall creating slippery patches and honey dew dripping on vehicles and surfaces)
- 7.1.4 Consideration is also given to species characteristics such as:
- Deciduous or evergreen;
 - Density of foliage;
- 7.1.5 Although not part of BS5837, the ACZ also reflects a more intangible factor of how comfortable the inhabitant of the property is likely to feel by the proximity of the tree to the house. It serves to protect retained trees from pressure to be felled or undergo surgery after occupation of the property.
- 7.1.6 The tree canopies are marked on the attached TCP as a continuous line around each individual tree.

7.2 Future growth

- 7.2.1 The future growth of retained trees is not considered to be a constraint to the Proposed Development.

7.3 Leaves, fruit and honeydew

- 7.3.1 Given the proximity of so many trees on and off-site, leaf fall will be a problem across the whole



of the Site in autumn. Where leaf fall will be a problem to the gutters, this can be managed through regular clearance and incorporating grates into the gutters so avoiding regular blockages.

- 7.3.2 Honeydew may cause a minor nuisance from the retained sycamore trees associated with G3, as these will be located adjacent to parking bays. However, this is not a significant alteration from the existing and is not considered to be a constraint to the Proposed Development. The proposed canopy reduction to G3 will further reduce the potential nuisance.

8. Conclusions

- 8.1.1 This survey and AIA include records of 5no. individual trees, 6no. groups of trees and 1no. hedgerow. These include 12no. category C. None of the surveyed trees were of category A, B or U retention value. The application considers all trees located on or within influencing distance of the Proposed Development.
- 8.1.2 In order to implement the Proposed Development, there will be an overall loss of 4no. category C individual trees, 1no. category C group and 1no. category C hedgerow. In addition to this, there will be a requirement for the partial removal of 1no. category C group of trees.
- 8.1.3 The proposed removals are all low quality and as such, will have minimal impact on the amenity value and scene of the surrounding area. The loss of these trees is considered acceptable in the context of the Proposed Development and with the recommended mitigation implemented.
- 8.1.4 The proposed removals are all low quality and as such, will have minimal impact on the amenity value and scene of the surrounding area.
- 8.1.5 As part of the Proposed Development 15no. new trees are proposed to be planted, 5no. at the frontage of the Site, 6no. to be planted centrally within the Site and 4no. to be planted on the northern boundary to enhance G6. Due to the low quality of the trees on-site, the Proposed Development is considered to result in a short-term not significant loss to tree cover, with a mid-to long-term gain; resulting in a net gain in canopy cover and amenity value.
- 8.1.6 The Proposed Development will result in a new incursion to the eastern side of G2 & G3 where the proposed parking bays will extend beyond the existing hard standing. In order to ensure that these offsite groups are not negatively impacted in the long-term, the proposed parking bays and access road within this area will be constructed upon a 150mm Wrekin ProtectaWeb. See the draft Tree Protection Plan (A004) at Appendix 4 for further information regarding its location and extent.

9. Recommendations

- 9.1.1 The removal of existing hard surfacing, foundations and built up ground in RPAs must be undertaken with hand tools only and/or under the direct supervision/guidance of the Arboricultural Clerk of Works.
- 9.1.2 The successful retention of trees will be dependent upon the quality and maintenance of the protection systems that are put in place. Should the Council be minded to grant planning permission, an Arboricultural Method Statement (AMS) should be conditioned to detail the measures by which retained trees at the Site and offsite will be protected.
- 9.1.3 An indicative draft tree protection plan (A004 – Appendix 4) has been provided, however, this is subject to alteration following a final decision notice and a detailed method statement.
- 9.1.4 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-site. Following installation of tree protection measures, a site meeting will be undertaken with the Tree Officer to ensure



satisfaction of all parties prior to any on-site works commencing.

- 9.1.5 It is recommended that a suitable competent arboriculturist, undertakes the site supervision and monitoring works.
- 9.1.6 In order for tree and root protection measures to work effectively all personnel associated with the construction process must be familiar with the Tree Protection Plan and subsequent AMS.
- 9.1.7 It is recommended that planning conditions be adhered to any approval for a suitable tree planting scheme and for the production of an Arboricultural Method Statement for implementation of tree protection, pre-commencement meetings and on-going site supervision.

10. References

British Standard 3998:2010 'Tree work – Recommendations'

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

British Standard 8545:2014 Trees: from nursery to independence in the landscape – Recommendations

National Planning Policy Framework (NPPF) 2019

The Forestry Act 1967

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

The Town and Country Planning Act 1990

11. Caveats and Limitations

- 11.1.1 The report is for the sole use of the client and its reproduction or use by anyone else is forbidden unless written consent is given by the author.
- 11.1.2 This is an arboricultural report and as such no reliance should be given to comments relating to buildings, engineering or soil.
- 11.1.3 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.
- 11.1.4 This is a report which should be to accompany a planning application and provides no detail specifically in relation to the health and safety of the trees.
- 11.1.5 All tree inspections were undertaken from ground level and no climbing inspections were undertaken.
- 11.1.6 Where trees have been captured beyond the Site boundary, all dimensions of trees and their associated parts are based on estimation unless otherwise stated. If trees are located within the Site boundary, measurements will not be estimated unless otherwise stated within the comments of the Tree Schedule.
- 11.1.7 Trees are growing dynamic structures. Whilst reasonable effort has been 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.
- 11.1.8 Trees are living organisms whose health, condition and structure can change quickly and without warning. Therefore, the contents of this report are valid for a period of one year from the date of this survey.

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- 11.1.9 On undertaking the recommended works, the arborist/tree surgeon must without delay report any defects that become apparent while climbing or working on the tree/s in question. Those defects must be reported immediately to the relevant project manager, landowner and/or the author of this report to enable the appropriate remedial action.
- 11.1.10 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.

Signed,

Jack Barnard *BSc (Hons). MArborA MICFor (Chartered Arboriculturist)*
Senior Arboricultural Consultant
Wharton Natural Infrastructure Consultants Ltd.

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Appendix 1: Aerial Photograph

1349-1351 Stratford Road, Shirley

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Appendix 2: Survey Methodology

- i. The trees on the Site were originally surveyed without reference to site layout as detailed in paragraph 4.4.1.1 of BS5837:2012. However, for the purposes of the Arboricultural Impact Assessment the Proposed Development for the Site has been considered.
- ii. The position of each tree was plotted with reference to the supplied ordinance survey plan. Small trees with a stem diameter less than 75mm were generally not surveyed as they would either be easily replaced or relocated.
- iii. Each individual tree has been given a tree identification number, the groups and hedges clearly defined for the purpose of this report. Metal tags have not been used for this survey as identification on-site does not require this. The tree numbers associated with each tree are cross referenced within the schedule and plans at Appendix 3 and 4 respectfully.
- iv. The tree species have been recorded with both common and botanical names.
- v. All tree heights have been assessed using a clinometer and where indicated in groups the height of the tallest tree was measured unless otherwise stated. Tree heights are given in metres.
- vi. All stem diameters were measured at 1.5 metres above ground level and are given in millimetre units (unless otherwise stated where "gl" is an abbreviation for ground level where diameter was measured just above root flare, "est" is an estimate and "av" is an average).
- vii. The canopy spread is recorded in either the four cardinal points or is given as an average diameter for the crown, especially in groups or where the crown is evenly weighted. Canopy spreads are measured in metres.
- viii. The height of the ground clearance is given in metres and is an estimate of the height of the first branch above ground level.
- ix. In absence of detailed information on the age the following classification has been used:

| | |
|---------------------|--|
| Young | Young trees aged less than 1/3 life expectancy; |
| Semi-Mature | Established specimen approaching 1/3 life expectancy; |
| Early-Mature | Middle age trees 1/3 – 2/3 life expectancy; |
| Mature | Mature trees over 2/3 life expectancy; |
| Over-Mature | Over-mature – declining or moribund trees of low vigour; and |
| Veteran | Veteran trees – specimens exhibiting features of biological, cultural or aesthetic value that are characteristic of, but not exclusive to, individuals surviving beyond the typical age range for the species concerned. |
- x. Age class is indicative and will vary between species.
- xi. The structural condition of the trees has been assessed and is summarised as:

| | |
|-------------|--|
| Good | Few minor defects of little overall significance; |
| Fair | A significant defect or several small defects; and |
| Poor | Major defect present or many small defects. |
- xii. The physiological condition has been recorded to provide an indication of the tree's general health and vitality. The trees have been described thus:

Arboricultural Impact Assessment

VERSION: V1a DATE: May 2020
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| | |
|-------------|---|
| Good | Generally in good health typical of the species; |
| Fair | Reasonable health with few defects; |
| Poor | Trees that exhibit significant defects which are irremediable or moribund tree; and |
| Dead | Tree has died |

- xiii. Each tree was individually assessed and comments, where appropriate, were recorded for the condition of each tree's roots, main stem and crown.
- xiv. General comments have also been made where appropriate, with recommendations when relatively immediate works are given.
- xv. Estimated remaining contribution has been categorised as: less than 10 years, 10-20 years, 20-40 years or over 40 years, based upon an assessment of the tree's potential safe useful life expectancy. The remaining contribution in years has not always been directly followed in relation to the retention categories of the trees as trees may have a long remaining life however be of little significance in terms of development.

Arboricultural Impact Assessment





VERSION: V1a DATE: May 2020
REF NO: 200507 1083 AIA V1a



Appendix 3: Schedules

BS5837:2012 Cascade Chart

Complete Tree Schedule

| Category and Definition | Criteria (including subcategories where appropriate) | | | ID Colour on Plan |
|--|---|--|--|--|
| Trees unsuitable for retention (see Note) | | | | |
| <p>Category U</p> <p>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</p> | <ul style="list-style-type: none">• Trees that have a serious, irremediable, structural defect, such that their early loss is expected due to collapse, including those that will become unviable after removal of other category U trees (e.g. where, for whatever reason, the loss of companion shelter cannot be mitigated by pruning);• Trees that are dead or are showing signs of significant, immediate, and irreversible overall decline; and/or• 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. <p><i>NOTE: Category U trees can have existing or potential conservation value which it might be desirable to preserve; see 4.5.7.</i></p> | | | <p>Dark Red (127-000-000)</p>  |
| Trees to be considered for retention (see Note) | | | | |
| | 1 - Mainly arboricultural qualities | 2 - Mainly landscape qualities | 3 - Mainly cultural values, including conservation | |
| <p>Category A</p> <p>Trees of high quality with an estimated remaining life expectancy of at least 40 years.</p> | Trees that are particularly good examples of their species, especially if rare or unusual; or those that are essential components of groups or formal or semi-formal arboricultural features (e.g. the dominant and/or principal trees within an avenue). | Trees, groups or woodlands of particular visual importance as arboricultural and/or landscape features. | Trees, groups or woodlands of significant conservation, historical, commemorative or other value (e.g. veteran trees or wood-pasture). | <p>Light Green (000-255-000)</p>  |
| <p>Category B</p> <p>Trees of moderate quality with an estimated remaining life expectancy of at least 20 years.</p> | 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 <i>with</i> material conservation or other cultural value. | <p>Mid Blue (000-000-255)</p>  |
| <p>Category C</p> <p>Trees of low quality currently in adequate condition with at least 10 years life expectancy, or young trees with a stem diameter below 150mm.</p> | 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 <i>no</i> material conservation or other cultural value. | <p>Grey (091-091-091)</p>  |



| Tree No. | Tag No. | Species (Common Name) | Species (Botanical Name) | Height (m) | Stem Dia (mm) | Crown Spread (m) | | | | Height of Crown Clearance (m) | Age Class | Phys Con | Struc Con | Additional notes | Preliminary works recommendations | Estimated remaining contribution | Ret Cat | RPA (m²) | RPA Radius (m) |
|------------------|---------|--------------------------|-----------------------------|---------------|---------------------|---------------------|---|---|---|--|--------------|-------------|--------------|--|--|--|------------|-------------|-------------------|
| | | | | | | N | E | S | W | | | | | | | | | | |
| INDIVIDUAL TREES | | | | | | | | | | | | | | | | | | | |
| T1 | No tag. | Common ash | Fraxinus excelsior | 15 | 445.53 | 4 | 6 | 4 | 4 | 4 | E/Mat | Fair | Fair | Individual off-site tree which overhangs existing property and site. Base of tree could not be accessed. Base, trunk and canopy heavily clad in ivy restricting detailed assessment. Canopy appears sparse with sections of deadwood. Limited medium term retention value. | Fell in order to implement the Proposed Development. | 10 to 20 years | C1 | 92 | 5.4 |
| T2 | No tag. | Norway maple | Acer platanoides | 10 | 320 | 4 | 5 | 4 | 3 | 1.7 | E/Mat | Fair | Fair | Access to base of tree could not be gained. Canopy appears sparse with some deadwood. Tight forking habit at 4.5m | Fell in order to implement the Proposed Development. | 10 to 20 years | C1 | 48 | 3.9 |
| T3 | No tag. | Myrobalan Plum | Prunus cerasifera | 9 | 330 | 3 | 4 | 2 | 2 | 1.7 | E/Mat | Fair | Fair | Access to base of tree could not be gained. Canopy appears sparse with some deadwood. Limited long term retention value. | Fell in order to implement the Proposed Development. | 10 to 20 years | C1 | 47.8 | 3.9 |
| T4 | No tag. | Chinese flowering cherry | Prunus serrulata | 4 | 200 | 2 | 4 | 2 | 1 | 1 | Mat | Fair | Fair | Small garden tree with significant canopy biase to the east. | Fell in order to implement the Proposed Development. | 10 to 20 years | C1 | 18.1 | 2.4 |
| T5 | No tag. | Common pear | Pyrus communis | 6 | 200 | 2 | 2 | 2 | 2 | 1 | Mat | Fair | Fair | Off-site pear tree. | No works required at time of assessment. | 10 to 20 years | C1 | 18.1 | 2.4 |

BS5837:2012 Tree Schedule

Client Name: Five Homes (Shirley) Limited
Site: 1349-1351 Stratford Road, Shirley
Ref No: 200507 1083 TS V1a

Consultant: J. Barnard
Survey Date: May 2020



| Tree No. | Tag No. | Species (Common Name) | Species (Botanical Name) | Height (m) | Stem Dia (mm) | Crown Spread (m) | | | | Height of Crown Clearance (m) | Age Class | Phys Con | Struc Con | Additional notes | Preliminary works recommendations | Estimated remaining contribution | Ret Cat | RPA (m²) | RPA Radius (m) |
|-------------|---------|------------------------------------|---|---------------|---------------------|---------------------|---|---|---|--|--------------|-------------|--------------|---|--|--|------------|-------------|-------------------|
| | | | | | | N | E | S | W | | | | | | | | | | |
| TREE GROUPS | | | | | | | | | | | | | | | | | | | |
| G1 | No tag. | Leyland cypress | Cupressus × leylandii | 9 - 10.5 | 150 - 320 | 4 | 4 | 4 | 4 | 0 | E/Mat | Fair | Fair | Linear group of Leland cypress comprising of 13 stems. Trees have not been formally managed. They provide an element of screening but are not considered to be of significant value. | Fell in order to implement the Proposed Development. | 20 to 40 years | C1 | 48 | 3.9 |
| G2 | No tag. | Portugal laurel | Prunus lusitanica | 6 - 8 | 100 - 220 | 5 | 5 | 5 | 5 | 0 | Mat | Fair | Fair | Off-site cherry laurel located on adjacent council land. | Reduce the eastern end of the group back to the Site boundary. | 10 to 20 years | C1 | 23 | 2.7 |
| G3 | No tag. | Common ash, Sycamore | Fraxinus excelsior, Acer pseudoplatinus | 12 - 16 | 150 - 310 | 5 | 5 | 5 | 5 | 2.5 | E/Mat | Fair | Fair | Off-site group of six sycamore stems and one ash stem. The ash appears to be on site. Tree trees are mutually suppressed and share on large canopy. Individually the trees are of poor quality. All stems are heavily clad in ivy. | Partial removal of the group as shown on the Tree Retention and Removals Plan (DWG No. A003). Reduce the eastern end of the group back to the Site boundary. | 10 to 20 years | C2 | 40.7 | 3.6 |
| G4 | No tag. | Cherry laurel, Lawson's cypress | Prunus laurocerasus, Chamaecyparis lawsoniana | 4 - 5 | 100 - 200 | 3 | 3 | 3 | 3 | 0 | E/Mat | Fair | Fair | A group of off-site rear garden trees. Trees have not previously been managed. | Reduce the eastern end of the group back to the Site boundary. | 10 to 20 years | C2 | 18.1 | 2.4 |
| G5 | No tag. | Corkscrew willow, Lawson's cypress | Salix matsudana, Chamaecyparis lawsoniana | 10 - 12 | 300 - 450 | 7 | 7 | 7 | 7 | 1 | Mat | Fair | Fair | Group of what appear to be off site trees for which access could not be gained due to overgrown nature of garden. Trees comprise of three varieties of Lawson cypress and a corkscrew willow. The willow appears to be in physiological decline with dieback throughout canopy. | Reduce the southern end of the group to clear over the proposed Plot 4 garden. | 10 to 20 years | C2 | 91.6 | 5.4 |
| G6 | No tag. | Cherry laurel, Leyland cypress | Prunus laurocerasus, Cupressus × leylandii | 9 - 10 | 230 - 300 | 3 | 3 | 3 | 3 | 1 | Mat | Fair | Fair | Northern boundary hedge of Leland cypress which structurally are not in good condition. The trees have historically been heavily reduced and have a number of branch failures associated. There are two cherry laurels directly south which should be removed. | Consider replacement of hedge/group. | 10 to 20 years | C2 | 40.7 | 3.6 |

BS5837:2012 Tree Schedule

Client Name: Five Homes (Shirley) Limited
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Ref No: 200507 1083 TS V1a

Consultant: J. Barnard
Survey Date: May 2020



| Tree No. | Tag No. | Species (Common Name) | Species (Botanical Name) | Height (m) | Stem Dia (mm) | Crown Spread (m) | | | | Height of Crown Clearance (m) | Age Class | Phys Con | Struc Con | Additional notes | Preliminary works recommendations | Estimated remaining contribution | Ret Cat | RPA (m²) | RPA Radius (m) |
|----------|---------|-----------------------------------|---|---------------|---------------------|---------------------|---|---|---|--|--------------|-------------|--------------|---|--|--|------------|-------------|-------------------|
| | | | | | | N | E | S | W | | | | | | | | | | |
| H1 | N/A | Common hawthorn, Common privet | <i>Crataegus monogyna</i> , <i>Ligustrum vulgare</i> | 2 - 3 | 40 - 80 | 2 | 2 | 2 | 2 | 0 | Mat | Fair | Fair | Small section of hedge directly beneath larger trees. Limited public value. | Fell in order to implement the Proposed Development. | 10 to 20 years | C1 | 3 | 0.9 |

Arboricultural Impact Assessment

VERSION: V1a DATE: May 2020
REF NO: 200507 1083 AIA V1a



Appendix 4: Plans

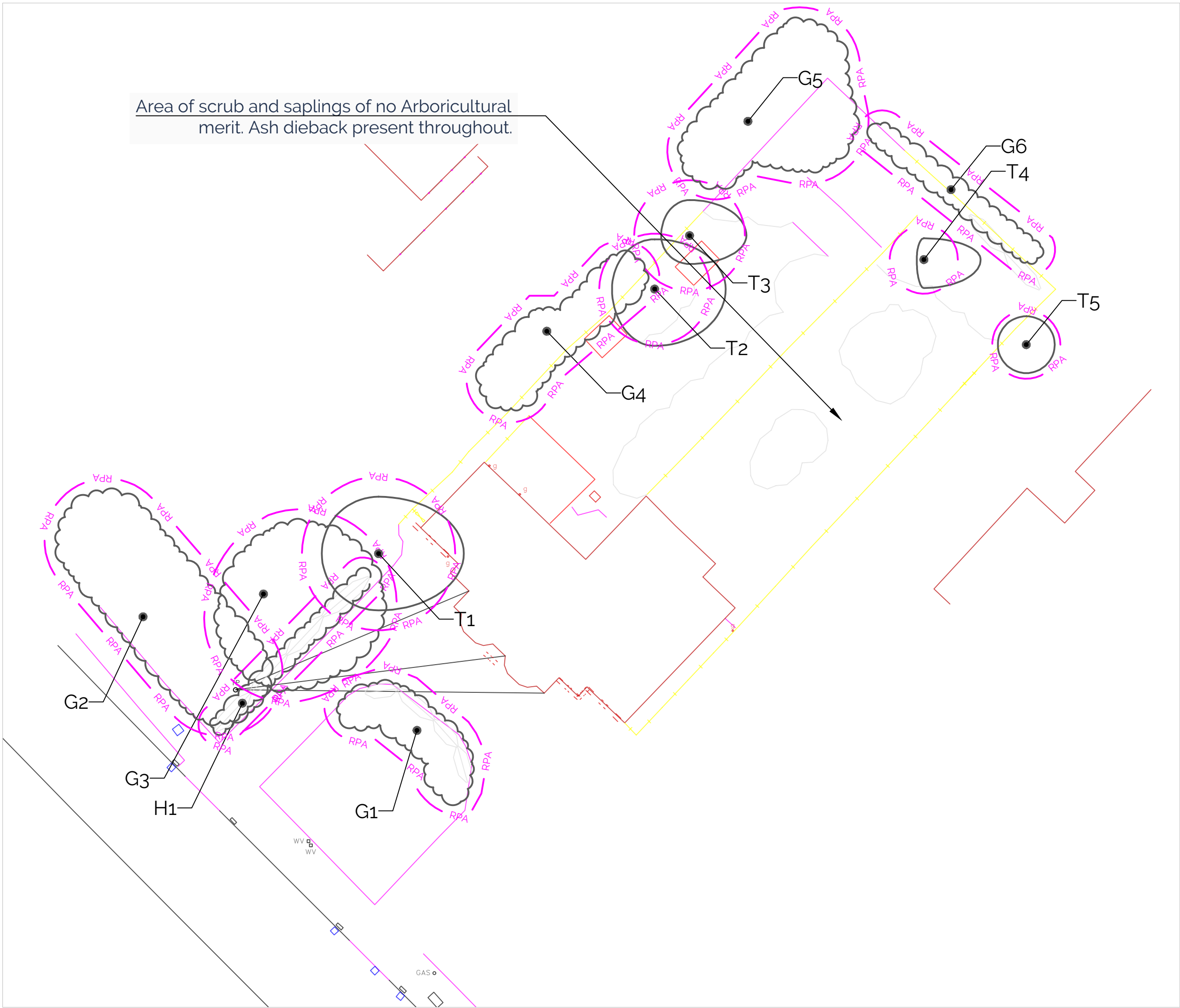
Tree Constraints Plan (A001)

Arboricultural Impact Plan (A002)

Tree Retention and Removal Plan (A003)

Draft Tree Protection Plan (A004)

Area of scrub and saplings of no Arboricultural merit. Ash dieback present throughout.



Scale: 1/250 @ A3



- A Category Trees / High Retention Value
- B Category Trees / Moderate Retention Value
- C Category Trees / Low Retention Value
- U Category Trees / Remove
- Canopy Spread (m)
- Tree Stem
- Root Protection Area (RPA)

Date: May 2020

Client: Five Homes (Shirley) Limited

Project: 1349-1351 Stratford Road, Shirley





Title: Tree Constraints Plan

| Map file reference | DWG No |
|---------------------|--------|
| 200507 1083 TCP V1a | A001 |



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-  Trees to be **retained** for development
-  Trees to be **removed** for development
-  Canopy Spread (m)
-  Tree Stem

Date: May 2020

Client: Five Homes (Shirley) Limited

Project: 1349-1351 Stratford Road, Shirley

Title: Tree Retention and Removal Plan

| Map file reference | DWG No |
|----------------------|--------|
| 200507 1083 TRRP V1a | A003 |

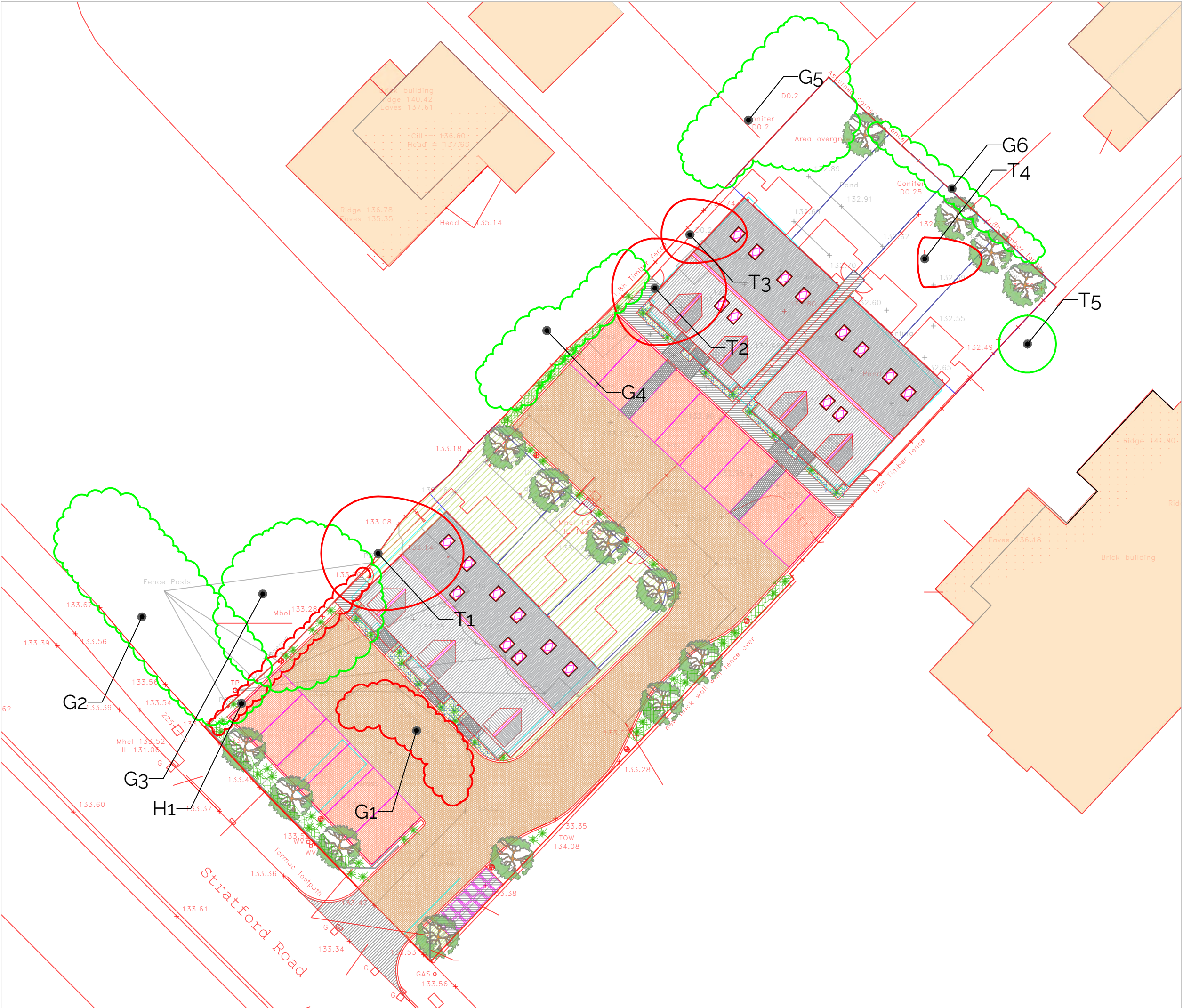


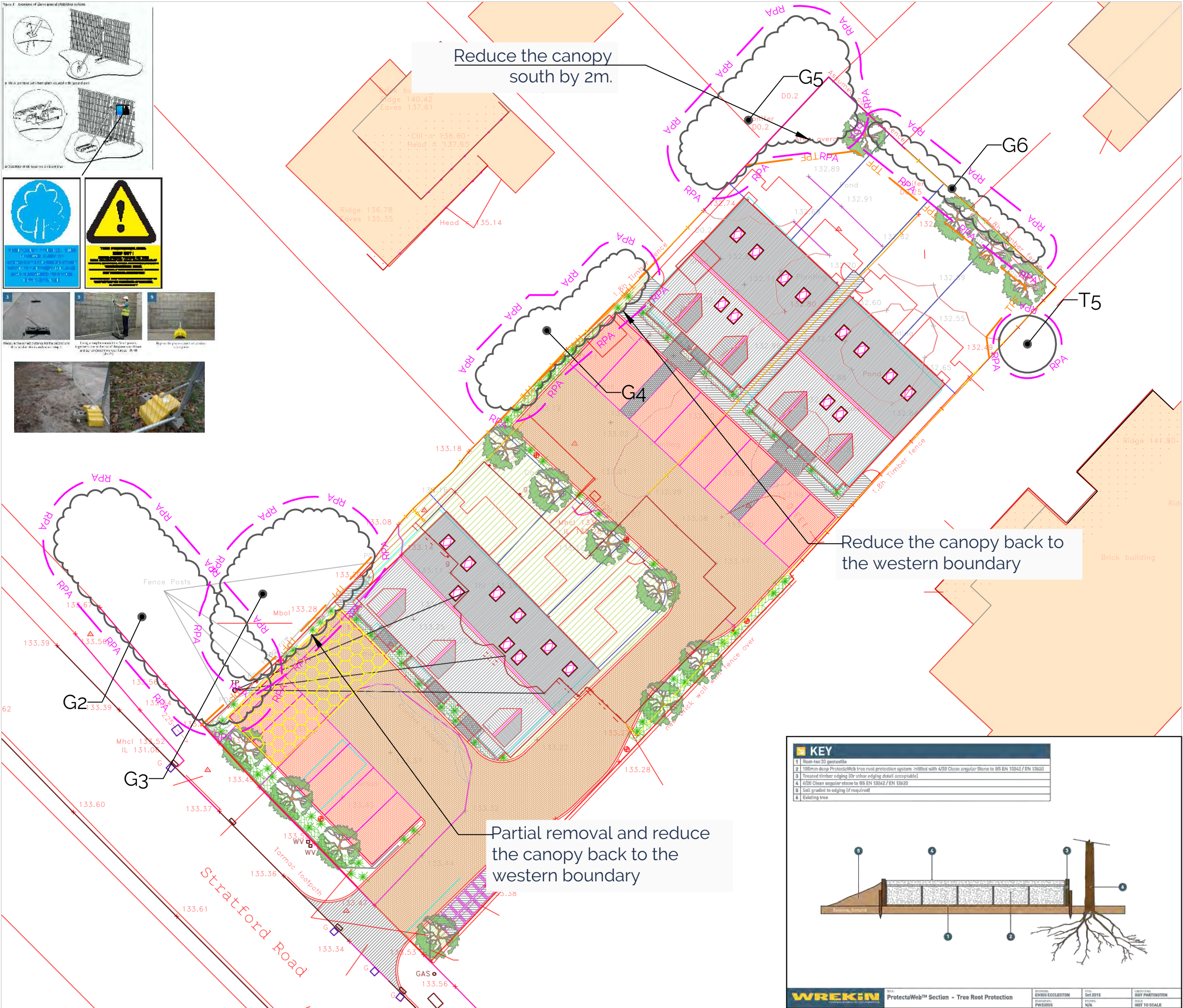
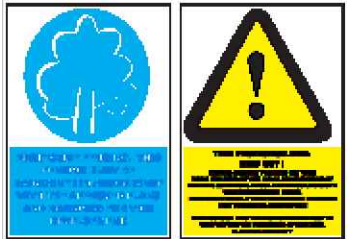
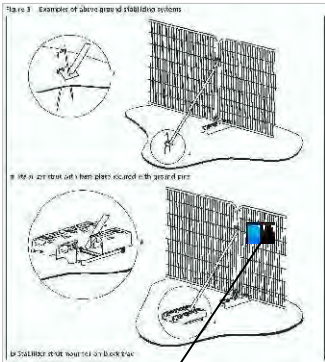
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Scale: 1/250 @ A3



- A Category Trees / High Retention Value
- B Category Trees / Moderate Retention Value
- C Category Trees / Low Retention Value
- U Category Trees / Remove
- Canopy Spread (m)
- Tree Stem
- Root Protection Area (RPA)

TPF Tree Protection Fencing

Above Soil Surface

Date: May 2020

Client: Five Homes (Shirley) Limited

Project: 1349-1351 Stratford Road, Shirley

Title: Tree Protection Plan

Map file reference

200507 1083 TPP V1a

DWG No

A004

WHARTON
Natural Infrastructure Consultants

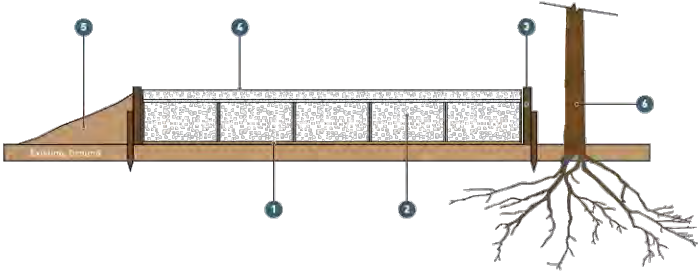
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| KEY | |
|-----|---|
| 1 | Root-free 3D geotextile |
| 2 | 150mm deep ProtectaWeb tree root protection system - infilled with 4/20 Clean angular Stone to BS EN 12642 / EN 12620 |
| 3 | Treated timber edging (Or other edging detail acceptable) |
| 4 | 6/20 Clean angular stone to BS EN 12642 / EN 12620 |
| 5 | Soil graded to edging (if required) |
| 6 | Existing tree |



WREKIN

ProtectaWeb™ Section - Tree Root Protection

DESIGNED BY: CHAD ECKELSTON

DATE: 04/2015

DESIGNED BY: RUP PARTINGTON

PROJECT: PW2005

STATUS: N/A

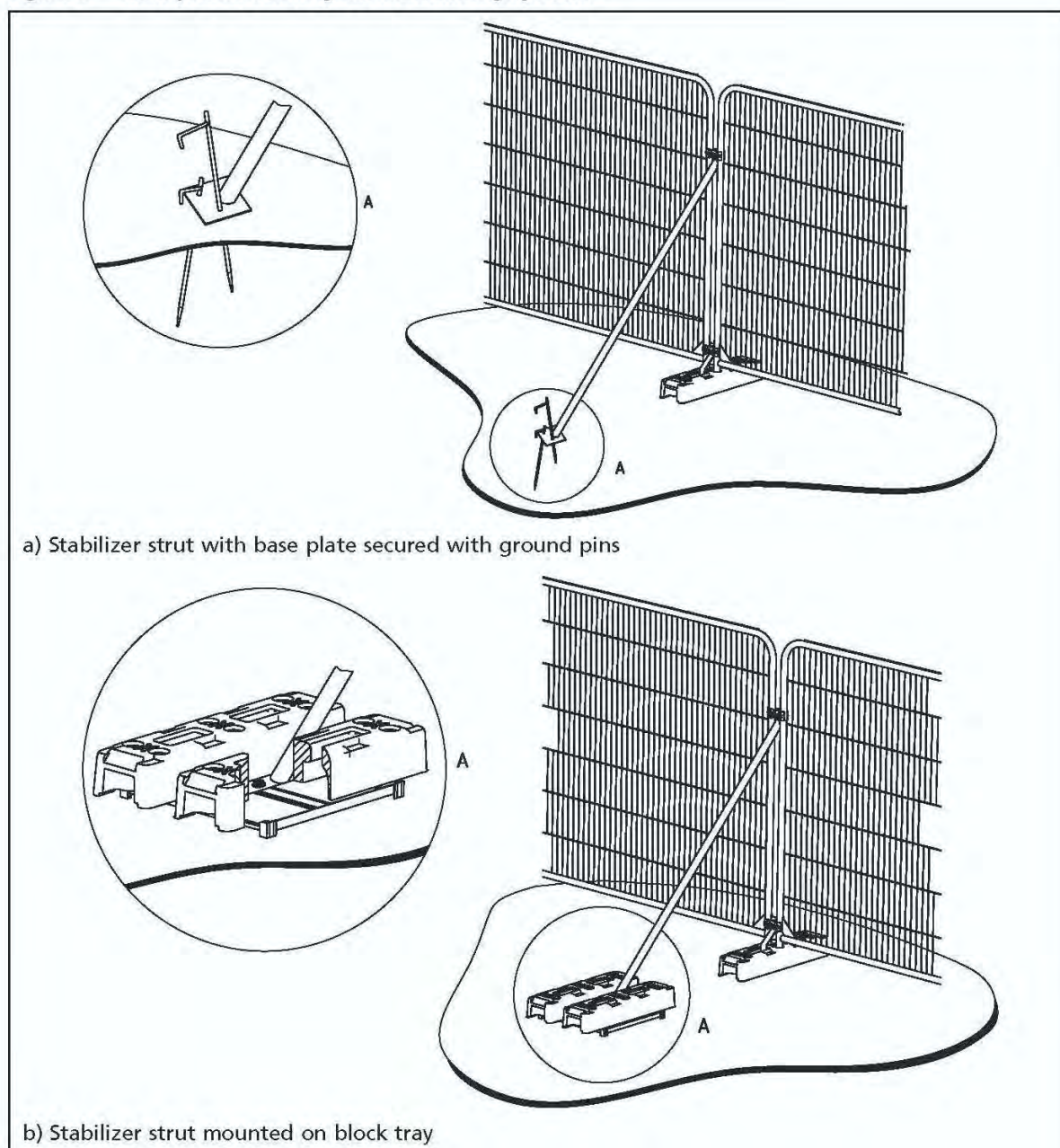
SCALE: NOT TO SCALE



Appendix 5: Tree Protection

Fencing Specification

Figure 3 Examples of above-ground stabilizing systems



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