HALLWOOD A S S O C I A T E S ARBORICULTURAL AND WOODLAND CONSULTANTS

TITLE: Arboricultural Impact Assessment: 325 Main Road, Sidcup

| DATE: | 22/06/2023 |
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| PREPARED BY: | Dominic Poston |
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ARBORICULTURAL IMPACT ASSESSMENT (APIII)

325 Main Road, Sidcup HWA10973-APIII 14 May 2022

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SUMMARY



The purpose of this report is to deliver specific information pertaining the arboricultural implications created by the proposed development. In accordance with the feasibility and planning sections of BS5837:2012 "Trees in relation to design, demolition and construction – Recommendations", trees deemed to be within the influencing distance of the projected construction have been evaluated for quality, longevity, and initial maintenance requirements.

This report provides sufficient information for the Local Planning Authority (LPA) to consider the effect of the proposed development on local character from a tree perspective. It is fully compliant with the BS 5837 advice relating to the planning application stage of the process and it meets national standard planning application validation requirements.

In this circumstance it is intended to redevelop and extend the existing semidetached house to provide 4no. flats and a single family dwelling in a garden setting. At 325 Main Road, Sidcup.

The arboricultural related implications of the proposal are as follows:

- Implications on Construction: Tree Protection and no-dig surfacing is required.
- Cultural Implications for Retained Trees: Management is required to boundary vegetation which has become outgrown in recent years and to make space for proposed amenity space.
- Implications on Local Character: Implications will be limited to the short term whilst new planting establishes.
- Post Development Implications: Boundary hedges will require regular management to maintain clearance.
- Post Planning Permission: Subject to achieving Planning Permission, a detailed Arboricultural Method Statement and Tree Protection Plan will be required. This will include the following: fencing type, ground protection measures, access facilitation pruning specification, phasing and an extensive auditable monitoring schedule.

Dominic Poston DipArb (RFS) FArborA MICFor CEnv BSc HDip Director Hallwood Associates Ltd 22/06/2023









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Part One: Introduction

This report is formulated in accordance with the recommendations contained within BS 5837, providing appropriate and sufficient information to enable the relevant Local Planning Authority (LPA) to consider the effects of the proposed development upon existing trees and local character. It includes an **Arboricultural Impact Assessment**, a **Tree Protection Plan** and a heads of terms **Arboricultural Method Statement** detailing how retained trees may be successfully integrated into the design. It is fully in line with the BS 5837 advice relating to the planning application stage of the process highlighted in Table B1 reproduced below:

| Table B.1 Delivery | of tree-related information into the planning | system | | | | |
|--|---|--|--|--|--|--|
| Stage of process | Minimum detail | Additional information | | | | |
| Pre-application | Tree survey | Tree retention/removal plan (draft) | | | | |
| Planning Application | Tree survey (in the absence of pre- application discussions) Tree retention/removal plan (finalized) Retained trees and RPAs shown on proposed layout Strategic hard and soft landscape design, including species and location of new tree planting Arboricultural impact assessment | Existing and proposed finished levels Tree production plan Arboricultural method statement heads of terms Details for all special engineering within the RPA and other relevant construction details | | | | |
| Reserved Matters / Planning Conditions | Alignment of utility apparatus (including drainage), where outside the RPA or where installed using a trenchless method Dimensioned tree protection plan Arboricultural method statement- detailed Schedule of works to retained trees, e.g., access facilitation pruning Detailed hard and soft landscape design | Arboricultural site monitoring schedule Tree and landscape management plan Post-construction remedial works Landscape maintenance schedule | | | | |

Table 1: Delivery of tree-related information into the planning system



1. Particulars of Instruction

1.1 Hallwood Associates Ltd (HWA) are instructed by Fantastic2 Ltd to provide specialist arboricultural advice in accordance with the principles laid out within British Standard BS 5837: 2012 "Trees in relation to design, demolition and construction – Recommendations (BS) with regards to a planning application being made at 325 Main Road, Sidcup

2. Authorship

2.1 Dominic Poston is a chartered arboriculturist and chartered environmentalist. He holds the Royal Forestry Society's Professional Diploma in Arboriculture, is a fellow member of the Arboricultural Association and a registered consultant with the Institute of Chartered Foresters. The findings in this report are reached through site observations and conclusions are made in light of his experience. Details are available upon request or at <u>www.hallwoodassociates.com</u>.

3. Report References

- 3.1 This Arboricultural Impact Appraisal is informed by reference material, including the following:
 - BS 5837: (2012) Trees in relation to Design, Demolition and Construction Recommendations;
 - BS 3998: (2010) Tree Works Recommendations;
 - National Joint Utilities Group (2007) Volume 4, Issue 2: Guidelines for the planning, installation and maintenance of utility apparatus in proximity to trees;
 - DTLR (2001) Principles of Tree Hazard Assessment and Management David Lonsdale
- 3.2 The following drawings and/or reports aided production of this Impact Assessment:
 - Existing site layout
 - Proposed site layout



4. Scope of Report

- 4.1 This report and all plans appended to it have been formulated using guidance given in the British Standard 5837: 2012 Trees in relation to design, demolition and construction – Recommendations (BS 5837)¹.
- 4.2 The tree survey was carried out independently, as far as possible, of the proposed new layout, as recommended in the British Standard.
- 4.3 The survey contains details of the size, condition and retention category of each tree which may be affected by the proposed development.
- 4.4 The retention category is derived from the British Standard which allows arboriculturists to place trees in certain bands so that impacts can be appropriately quantified and managed; broadly defined as follows:
 - A Category High quality and value such a condition as to be able to make a substantial contribution (a minimum of 40 years is suggested);
 - B Category Moderate quality and value those in such a condition as to make a significant contribution (a minimum of 20 years is suggested);
 - C Category low quality and value currently in adequate condition to remain until new planting could be established (a minimum of 10 years is suggested).
 - U Category in such a condition that any existing value would be lost within 10 years and which should, in the current context be removed for reasons of sound Arboricultural management.

¹ British Standards Institution (2012) BS 5837: Trees in relation to design, demolition and construction – Recommendations, BSI <u>https://shop.bsigroup.com/</u>



5. Limitations

- 5.1 The potential effect of development on trees, whether statutorily protected (e.g. by tree preservation order or by their inclusion within a conservation area) or not, is a material consideration that is taken into account in dealing with planning applications. HWA have not checked whether trees on site are statutorily protected as this can delay production of the report. The applicant must carry out a statutory tree protection check if you intend to undertake any works prior to formal planning consent being issued.
- 5.2 All rights in this report are reserved. Its content and format are for the exclusive use of the addressee in dealing with this site. It may not be sold, lent, hired out or divulged to any third party not directly involved in this site without the written consent of Hallwood Associates Limited.
- 5.3 This report is restricted to those trees shown on the attached plans and described in the tree survey schedule. All plans and discussions within this report are based entirely on the drawings provided to Hallwood Associates and referenced above. Any material planning changes after the date of report issue will invalidate this report.
- 5.4 Hallwood Associates Ltd have undertaken their tree survey with due care and attention to identify accurately all tree species present at the time of survey. However, where surveys are undertaken when trees are out of leaf, if access is not granted or clear, or where insufficiently accurate tree location detail is provided by the client; trees may be grouped and general tree species composition listed.
- 5.5 The statements, findings and recommendations made within this report do not take into account any effects of extreme climate and weather incidences, vandalism, changes in the natural and built environment around the tree(s) after the date of this report, nor any damage whether physical, chemical or otherwise. Hallwood Associates cannot accept any liability in connection with the above factors, nor where recommended tree management is not carried out in accordance with modern tree health care techniques, within any proposed timeline.
- 5.6 Due to the above statements, this report remains valid for two years from the date of issue only.



6. Methodology

- 6.1 Each tree was surveyed and given a number corresponding to the provided plan(s) found at Appendix B. For each group or individual information was collected as recommended at 4.4.2.5 of BS 5837. The survey was preliminary in nature and did not involve aerial or detailed inspection. This data is held within the tree schedule which can be found at Appendix A.
- 6.2 BS5837 recommends that trees within categories A-C (where A is highest quality) are a material consideration in the development process. However, it should be noted that young trees with a stem diameter less than 150mm may be considered for relocation. Category U trees are those that will not be expected to exist for long enough to justify their consideration in the planning process. The A-C categories are combined with the numbers 1, 2 or 3. These numbers signify whether the justification for the category was based on arboricultural, landscape or cultural/conservation values respectively. The tree categories are illustrated on the plans with colour coding. Category A trees are light green, category B are mid blue, category C are grey and category U are dark red.
- 6.3 Where category U trees are notable for their conservation, heritage or landscape value, even though only for the short term, they may be upgraded, although they might be suitable for retention only where issues concerning their safety can be appropriately managed.
- 6.4 Section 4.6 of BS5837 recommends that the trunk diameter measurement for each tree is used to calculate the root protection area (RPA), which can then be interpreted to identify the design constraints and, once a layout has been developed to be protected by barriers (tree protection plan (TPP)).
- 6.5 Following inspection and grading of the trees, the information listed in Appendix A is used to provide constraints guidance to the project architect based on the locations of the best trees. All U trees are ignored as they not of good enough quality to be considered as a material constraint on development.
- 6.6 The enclosed tree protection plan (TPP) shows the trees proposed for retention, their relevant RPA and provisional positions for protective fencing, ground protection and any specially engineered surfacing.



7. The Site



This aerial image is provided courtesy of GPAD Architects. The red line indicates the approximate site boundary and is illustrative only.

- 7.1 The site was visited by Dominic Poston on 13 June 2023 and comprises a semi-detached residential dwelling with associated outbuildings and garden.
- 7.2 The arboricultural features within, and adjacent to, the site is dominated by linear tree groups forming the boundaries to the site. These groups and hedgerows contribute to the overall character of the site.
- 7.3 The British Geological Survey Online Geology Map indicates the soils on site contain clay
- 7.4 Precautions to prevent soil compaction to rooting zones of retained trees are carefully specified on this site due to the presence of clay.



Part Two: Arboricultural Impact Assessment

This arboricultural impact assessment has taken account of all the recommendations set out in BS 5837 section 5.4, as reproduced below:

5.4 Arboricultural impact assessment

5.4.1 The project arboriculturist should use the information detailed in **5.2** and **5.3** to prepare an arboricultural impact assessment that evaluates the direct and indirect effects of the proposed design and where necessary recommends mitigation.

5.4.2 The assessment should take account of the effects of any tree loss required to implement the design, and any potentially damaging activities proposed in the vicinity of retained trees. Such activities might include the removal of existing structures and hard surfacing, the installation of new hard surfacing, the installation of services, and the location and dimensions of all proposed excavations or changes in ground level, including any that might arise from the implementation of the recommended mitigation measures. In addition to the impact of the permanent works, account should be taken of the buildability of the scheme in terms of access, adequate working space and provision for the storage of materials, including topsoil.

NOTE Scaled cross-sections and other drawings might be required to demonstrate the feasibility of the proposals (see Annex B).

5.4.3 As well as an evaluation of the extent of the impact on existing trees, the arboricultural impact assessment should include:

- a) the tree survey (see 4.4);
- b) trees selected for retention, clearly identified (e.g., by number) and marked on a plan with a continuous outline;
- c) trees to be removed, also clearly identified (e.g., by number) and marked on a plan with a dashed outline or similar;
- d) trees to be pruned, including any access facilitation pruning, also clearly identified and labelled or listed as appropriate;
- e) areas designated for structural landscaping that need to be protected from construction operations in order to prevent the soil structure being damaged;
- f) evaluation of impact of proposed tree losses;
- g) evaluation of tree constraints (see 5.2) and draft tree protection plan (see 5.5);
- h) issues to be addressed by an arboricultural method statement (see **6.1**), where necessary in conjunction with input from other specialists.

8. The Proposal

8.1 The proposal is to redevelop and extend the existing semidetached house to provide 4no. flats and a single family dwelling in a garden setting.

9. Arboricultural Features

9.1 There are ten (10) Trees, one (1) group of trees and one (1) Hedge which have been categorised within or immediately adjacent the site. Below is a visual representation of the tree quality categorisation across the surveyed trees.

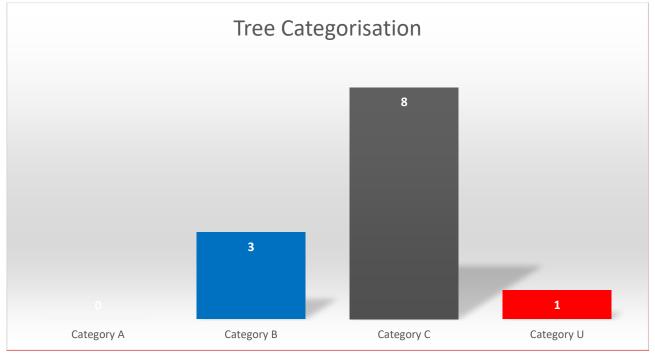


Figure 1: Tree categorisation (BS 5837: 2012)

9.2 A schedule of tree condition and category of retention (see 4.4 above) is attached at AppendixA.



10. Impact Assessment

- 10.1 This section evaluates the direct and indirect effects of the proposals on trees on and adjacent to the site. Methods to avoid or mitigate impacts are assessed, along with identifying remediation and enhancement opportunities. It sets out protection measures and principles for work close to trees, including in Root Protection Area (RPAs)². The buildability of the project is considered, including access, site facilities, plant movement, parking etc.
- 10.2 Due to the stage of the project, full details of construction methods, service/utility routes, landscaping and finishes are not available, and a contractor may not have been appointed. Following planning consent, full details of tree protection and methods of work close to tree must be addressed in an Arboricultural Method Statement. At this stage, a heads of terms Arboricultural Method Statement is included (see Part Three).
- 10.3 One (T4) Category 'U' trees have been identified for removal due to management reasons. Their removal would have been required irrespective of any development proposal and it is therefore considered inappropriate to imply any loss accruing.
- 10.4 Following a review of the proposed layout, an assessment of the impact on trees, both during and after development, and those that need protection using special precautions, is summarised below in Table 2:

| British Standard 5837 Category & Reference Number | | | Impact | Reason | Mitigation | |
|---|------|------------------------------------|---------------------------------|--|--|--|
| Α | В | С | | | | |
| None | Т6 | T2, T3, T8 and part of H1 | Trees to be removed | Building construction and/or proximity | New planting in landscape phase and/or retained trees. | |
| None | Τ7 | T1, T5 & Grp1 | Trees to be pruned | To make space for development | All works to BS 3998. | |
| None | Τ7 | T5 & H1 | RPA disturbance | Removal or installation of surfaces/ structures/ landscaping | Protect using special precautions. | |
| None | None | Grp1 & T5 | Post development considerations | Shading/encroachment/ dominance | Regular 'garden' management. | |

Table 2: Arboricultural Implications (T = Tree, G = Group, H = Hedge)

² A Root Protection Area (RPA) is a layout design tool indicating the minimum area surrounding a tree that contains sufficient rooting volume to maintain the trees viability, and where the protection of the roots and soil structure is treated as a priority.

NB: All retained trees will be protected during development by using fencing and/or ground protection, and only those requiring special precautions to limit the impact of encroachment are listed in Table 1.



10.5 The impact of tree removals on local character.

Category B (Moderate value) trees (T6): This tree is considered important with the potential to contribute to amenity for some time. However, they could not be successfully integrated into the proposed layout due to their position and/or the overwhelming constraint they pose to the wider development of the site. It is considered that their loss can be mitigated through the planting of semi-mature stock during the landscaping phase.

Category C (Low value) trees (T2, T3, T8 and part of H1): These trees are either not particularly prominent from outside the immediate site or of insufficient value to be considered a constraint upon development. Furthermore, retained trees to the site boundary and new planting will buffer any loss to the extent that there will be little to no impact on local character.

10.6 The impact of tree pruning (T1, T5, T7 and Grp1).

The proposed tree pruning involves the removal of second and third order laterals or subordinate branches only and all works can be undertaken in full accord with the principles laid out in BS 3998.

10.7 The impact upon tree roots and RPA disturbance (H1, T5 & T7).

There will be encroachment into the RPAs of these trees in the form of new surfacing. HWA have carefully reviewed the proposals and existing site conditions and believe the affected trees can be retained through the adoption of appropriate precautionary or specially engineered solutions. It is considered that this can be implemented without any long-term detrimental impact on tree health, with the detail to be agreed as part of a planning condition (Arboricultural Method Statement).

10.8 Post development considerations.

There are no overwhelmingly adverse impacts upon retained trees once the development is completed and occupied that cannot be dealt with through routine 'garden' management such as hedge cutting.

11. Mitigation

11.1 Tree Planting.

In the context of overall tree loss resulting from this proposal, significant new space is retained on the frontage with Marechal Niel Parade for the establishment of new tree planting and advice from HWA has been sought on appropriate species. The list being as follows:

• Himalayan birch (Betula utilis) for the site frontage and in mitigation for the loss of T6 and T8. This will contrast well with the retained yew whilst not imposing significant shade on this valuable southern aspect.



- Cockspur hawthorn (Crataegus crus-gali) and rowan (Sorbus aucuparia) as small to medium sized trees for reinforcing Grp 1 following reduction and removal of dead tree (T4).
- Eastern redbud (Cercis canadensis) and Juneberry (Amelanchier lamarckii) as small tree/large shrub planting internal to the site.



Part Three:

(Heads of terms summary) Arboricultural Method Statement

An Arboricultural Method Statement details how retained trees are to be protected and how operations that may affect trees will be carried out to minimise any adverse impact on them. The details of how the site will be managed can only be finalised once the post-consent detailed planning begins. As explained in clause 5.5.6 of BS 5837, it is normally sufficient to list a heads of terms summary of the issues requiring more detailed consideration once consent is issued. The following list identifies those issue requiring consideration on this site:

- Details of retained arboricultural consultant and scheme of arboricultural supervision.
- Details of a 'toolbox' talk on arboricultural matters to be included in induction training for all operatives on site.
- The order of work on site, including demolition, site clearance and building work.
- Erection and maintenance of tree protection measures.
- Roles and responsibilities (including contact details) with regard tree management and protection on site.
- How accidents and emergencies involving trees will be managed.
- Details of facilitation pruning and access into site.
- The parking arrangements and final site compound (including welfare facilities) for workers and visitors.
- Areas for loading and unloading of materials and storage of materials and plant.
- How machinery and equipment (such as excavators, cranes and their loads, concrete pumps and piling rigs) will enter, move on, work on, and leave the site.
- Details of earthworks, grading and mounding and removal of spoil, including any planned lowering or raising of ground levels.
- Final service and utility locations, including the method of installation when near trees.
- Details and precise cross-sections where no-dig surfacing is to be installed.
- How post-construction impacts through compaction to soil near trees will be ameliorated.



Appendix A: Tree Survey Schedule



| (Ref) No. | Species | Height (m) | Stem diameter (mm) | Branch spread N (m) | Branch spread E (m) | Branch spread S (m) | Branch spread W (m) | Crown Clearance (m) | Structural Condition | Physiological Condition | Life Stage | Observations | Preliminary Recommendations (irrespective of development proposals) | Remaining contribution (yrs) | Value categorisation (BS 5837) |
|-----------|-------------|------------|-----------------------------|---------------------|---------------------|---------------------|---------------------|---------------------|----------------------|----------------------------|------------|--|---|---------------------------------|-----------------------------------|
| T1 | Cherry plum | 9 | 300, 325 | 4 | 4 | 6 | 4 | 2 | Poor | Fair | M | Previous heavy reduction with lareg diameter pruning wounds. Twin stem from ground level with ivy impeding full inspection. | Consider lateral reduction to maintain and reduce loading on (potentially) decayed stems. | 10+ | C1 |
| T2 | Elder | 5 | 175 | 3 | 3 | 1 | 3 | 3 | Fair | Fair | SM | Suppressed specimen growing out of Grp1 over access drive. Poor amenity and arboricultural value. | None | 10+ | C2 |
| T3 | Cherry Plum | 9 | 200, 225, 250, 275 | 7 | 4 | 3 | 4 | 2 | Fair | Fair | м | Outgrown from Grp1 and low over access drive. | Crown lift to 3m over access drive. | 20+ | C2 |
| T4 | Pear | 6 | 275 <i>,</i> 250 | 3 | 3 | 4 | 2 | 2 | Poor | Poor | М | Predominantly dead. | Fell | <10 | U |
| Т5 | Holly | 9 | 200, 175 | 2 | 2 | 2 | 2 | 2 | Fair | Good | м | Planted specimen framing pedestrian entrance but now outgrown. | Bring back into management. | 20+ | C2 |
| T6 | Crab apple | 6 | 350 | 4 | 4 | 3 | 4 | 2 | Good | Good | M | Nice specimen. Crown break at 2m. Not particularly prominent due to T7. Starting to encroach upon property. | None | 20+ | B2 |



| (Ref) No. | Species | Height (m) | Stem diameter (mm) | Branch spread N (m) | Branch spread E (m) | Branch spread S (m) | Branch spread W (m) | Crown Clearance (m) | Structural Condition | Physiological Condition | Life Stage | Observations | Preliminary Recommendations (irrespective of development proposals) | Remaining contribution (yrs) | Value categorisation (BS 5837) |
|-----------|----------------|------------|-------------------------------------|---------------------|---------------------|---------------------|---------------------|---------------------|----------------------|----------------------------|------------|---|--|---------------------------------|-----------------------------------|
| Т7 | Yew | 8 | 325 | 3 | 4 | 3 | 2 | 0 | Good | Good | SM | Outgrown from boundary hedge. Prominent in street scene. | Consider bringing into management to maintain size. | 40+ | B2 |
| Т8 | Lawson cypress | 6 | 200, 200, 100, 100, 100 | 3 | 3 | 3 | 3 | 1.5 | Fair | Good | SM | Previoulsy topped at 2m and also managed at some point as coppice. Now outgrown and dominating front garden. | Consider removal and replacement. | 20+ | C2 |
| Т9 | Purple plum | 3.5 | 75 | 2 | 1 | 0.5 | 1 | 2 | Fair | Fair | Y | New street planting. | None | 10+ | C2 |
| T10 | Whitebeam | 7 | 275 | 3.5 | 3 | 3 | 3 | 3 | Good | Good | SM | Established street planting overhanging entrance drive. | None | 20+ | B2 |
| Grp1 | Mixed | <9 | <300 | 3 | 3 | 3 | 3 | 0 | Fair | Fair | м | Mixed broadleaved tree and shrub species, including budleija, viburnum, holly, cherry plum and others | Consider bringing into hedge management. | 20+ | C2 |
| H1 | Mixed | <2.5 | <100 | 0.5 | 0.5 | 0.5 | 0.5 | 0 | Good | Good | SM | Managed boundary hedge. Predominantly privet but including other ornamental species. | Continue management. | 20+ | C2 |

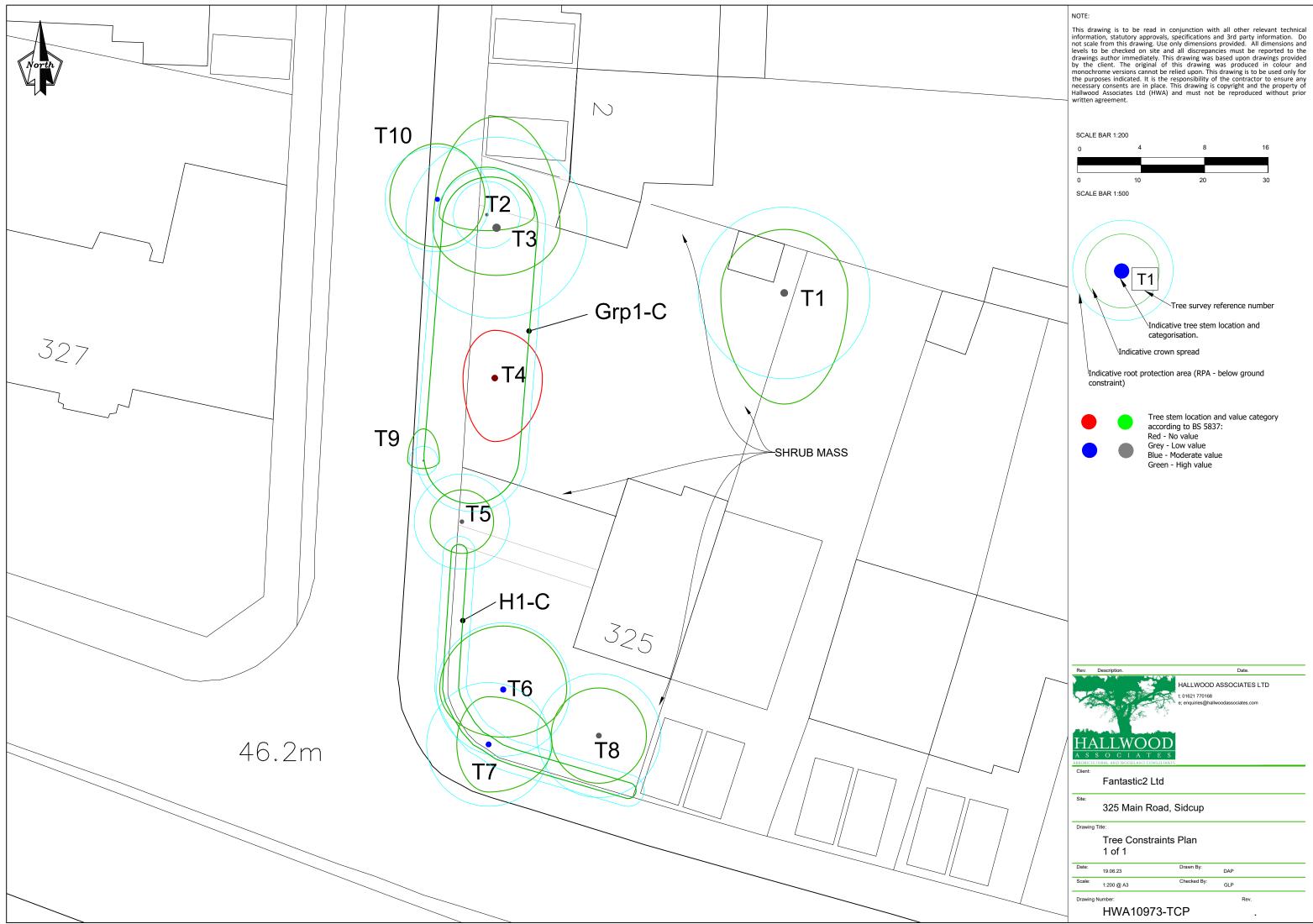




Appendix B: Plans



Figure 1: Tree Constraints Plan HWA10973-TCP



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| | HWA10973-1 | CF |



Figure 2: Tree Removal/Retention Plan HWA10973-TPP.

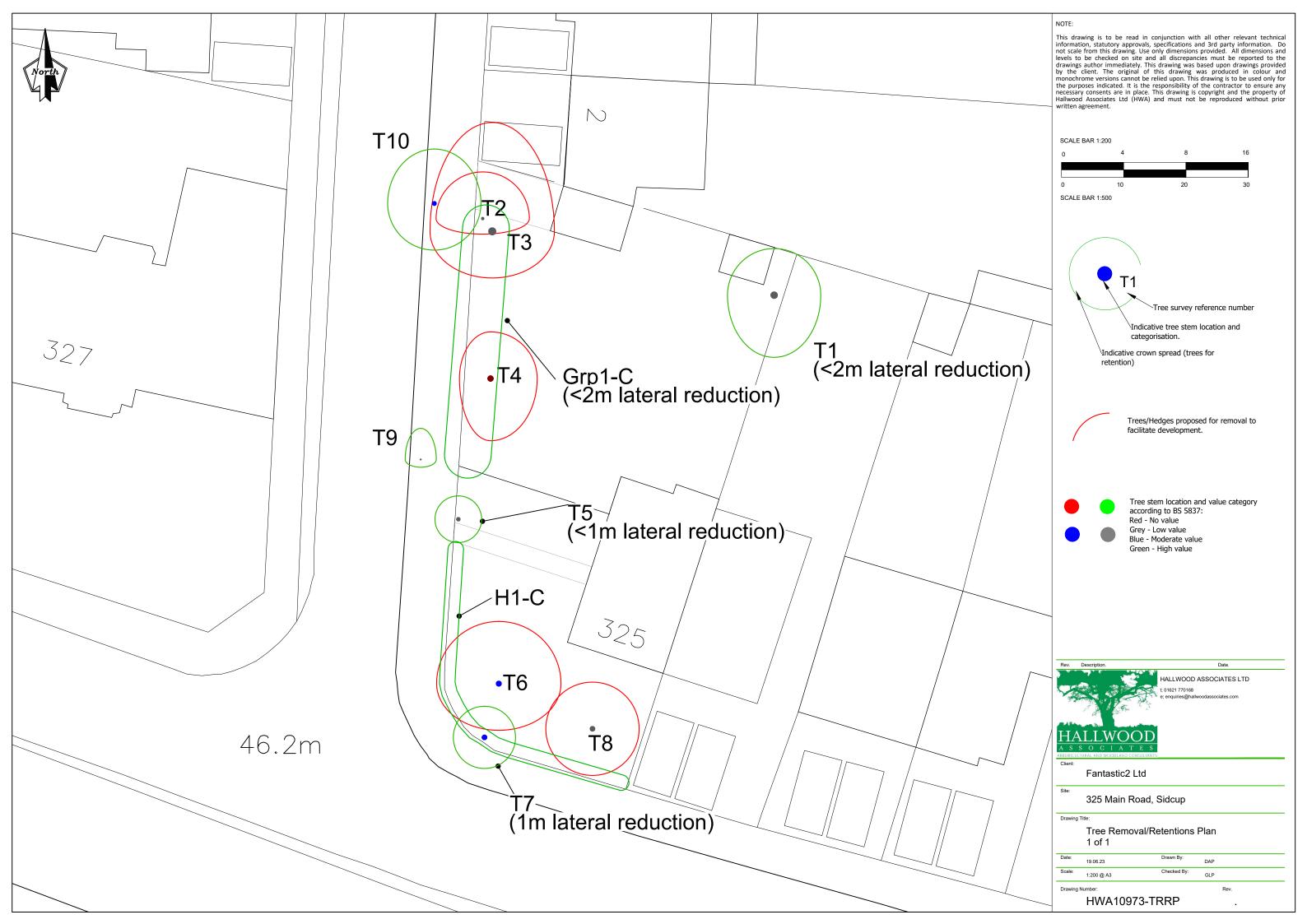
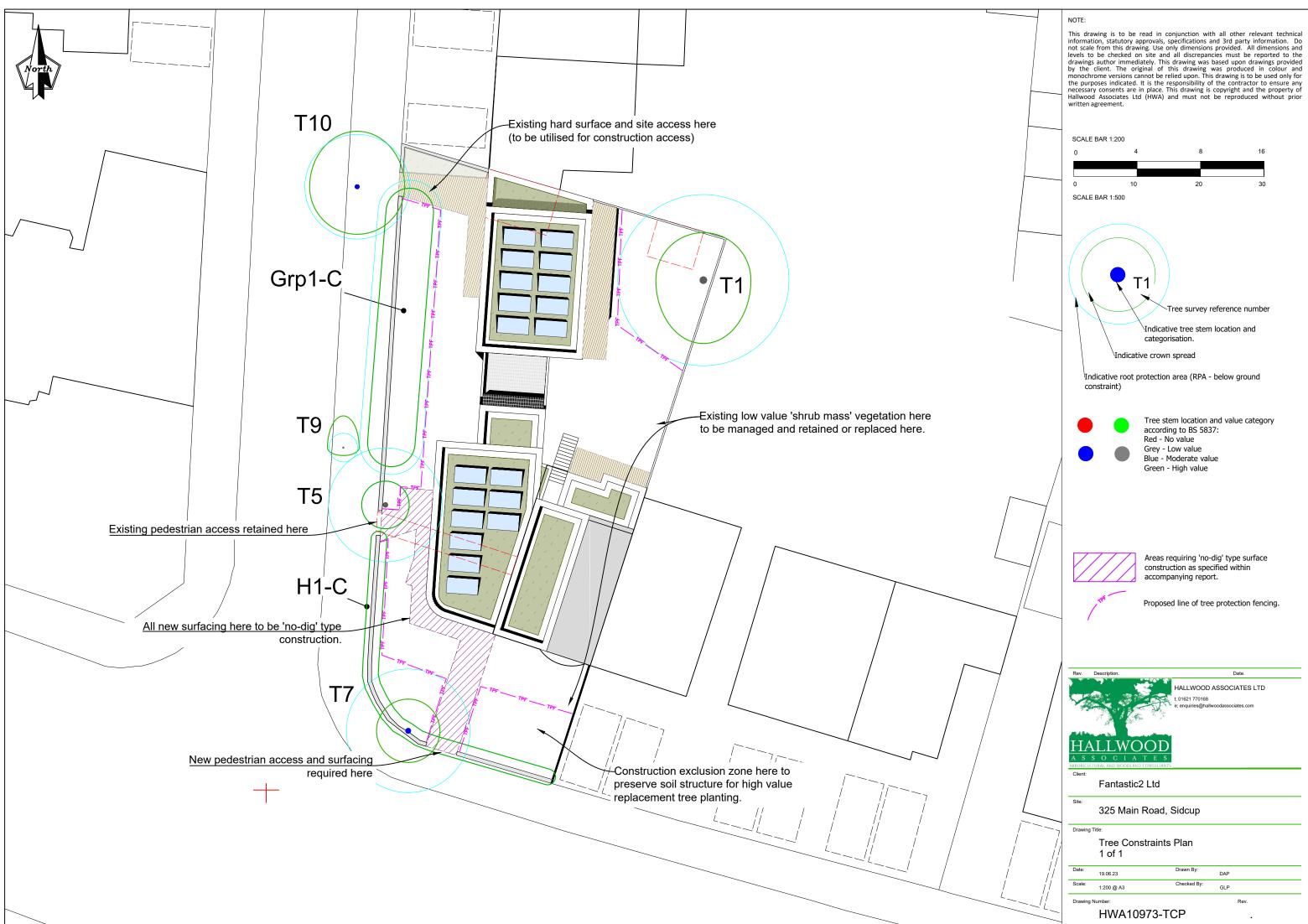




Figure 3: Tree Protection Plan HWA10973-TPP.



| N/N | 1097 | 72 7 | |
|----------------|------|------|--|
| | 1031 | J-1 | |