Merewood
Arboricultural Consultancy Services

Arboricultural ASSOCIATION
Professional Member
No. PRO 1047

# Arboricultural Implications Assessment and method statement for a proposed development at Land rear of 4-6 Copperfield Avenue Hillingdon UB8 3NU

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**Prepared by**
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**Date**
17/08/2022



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# 1.0 Introduction

## 1.1 Instruction

1.1.1 I am instructed by Sandhu Property Developments Ltd to undertake an Arboricultural Survey at Land to the rear of 4-6 Copperfield Avenue Hillingdon. I am also instructed to assess the likely impact of development proposals and produce an Arboricultural Method Statement detailing how trees shall be protected from the proposed construction activity.

1.1.2 The survey is required to support planning proposals for the erection of 2 x 2 bed dwellinghouses and 1 x 2 bed dwellinghouse with associated parking and amenity space including the demolition of 2A Copperfield Avenue.

## 1.2 The Site

1.2.1 4-6 Copperfield Avenue Hillingdon includes detached and semi-detached bungalows with front gardens given over to parking spaces and rear gardens. The rear gardens of all of the properties have been amalgamated to form a single open area at the backs of the properties.

1.2.2 The site is bordered by Copperfield Avenue to the west and by other residential properties on all other sides. The properties are positioned on the east side of Copperfield Avenue which is a residential road just to the north of Hillingdon Hospital, south of Uxbridge town centre. The surrounding area is typified by medium-high density residential housing, local shops and offices.

1.2.3 The topography of the site is more or less level.

1.2.4 It has been established at the time of the survey that the trees on the site are not covered by a Tree Preservation Order nor are they located within a designated Conservation Area (search conducted on Hillingdon Council website 15/08/22).

## 1.3 Survey date

1.3.1 The trees at 4-6 Copperfield Avenue Hillingdon were surveyed on Wednesday, July 20th, 2022.

## 1.4 Scope and Purpose of the report

1.4.1 The tree survey and assessment of existing trees has been carried out in accordance with guidance contained within British Standard B.S. 5837:2012 ‘Trees in relation to design, demolition and construction - Recommendations’ (hereafter referred to as B.S. 5837). The guidelines set out a structured assessment methodology to assist in determining which trees would be deemed either as being suitable or unsuitable for retention.

1.4.2 The purpose of this report therefore is therefore to firstly, present the results of an assessment of the existing trees' arboricultural value, based on their current condition and quality and to secondly, provide an assessment of impact arising from the development of the site.

1.4.3 The report is designed to support a planning application for development proposals at the above site. The survey has therefore focused on any trees present within or bordering the site that may potentially be affected by the future proposals or will pose a constraint to any proposed development

### 1.5 Documents referred to

1.5.1 The tree survey and this report have been prepared with reference to the following documents:
The proposed site layout plan
The schedule of tree constraints (appendix 1)
The tree protection plan

## 2.0 Results

### 2.1 Results summary

2.1.1 Appendix 1 presents details of the individual trees and groups found during the assessment including heights, stem diameters and rpa's, crown spread (normally measured to cardinal points unless otherwise indicated), an indication of physiological and structural condition, age class, any appropriate management recommendations, estimated life expectancy and a BS5837 category of quality.

2.1.2 The survey has revealed that that of the 2 trees surveyed, 0 are category 'A' 1 is category 'B'; 1 is category 'C' and 0 are category 'U'.

## 3.0 Arboricultural Impact Assessment

### 3.1 Overview

| Development activity | Potential impact | Consequence | Mitigation |
|---|---|---|---|
| Delivery of materials to the site<br><br>Plant machinery accessing the site | Soil compaction and erosion | Root damage and die back limiting the ability of the tree to take up water and nutrients | Create construction exclusion zones (CEZ's) by the erection of barrier fencing that takes account of branch spread as well as roots |
| Storage of materials on the site | Leachate from chemical based products contaminating soil | Roots die back and soil becomes contaminated inhibiting future root recovery | Provide a dedicated area for the storage of materials following delivery away from root protection areas. |

| | | | |
|---|---|---|---|
| Foundation excavation | Severing of roots | Root damage and die back limiting the ability of the tree to take up water and nutrients.<br><br>Crown die back<br><br>Death of the tree | Ensure excavation does not spill over onto root protection areas (RPA's) especially if piling and piles need to be relocated.<br><br>Seek arboricultural advice before proceeding if excavations are likely to overextend |
| Provision of services requiring excavation | Severing of roots | Root damage and die back limiting the ability of the tree to take up water and nutrients | Route services outside of RPA's. If this is not possible consider the best options for minimizing any potential impact in line with NJUG guidelines |
| Mixing of cement, plaster, etc. | Leachate from chemical based products contaminating soil | Roots die back and soil becomes contaminated inhibiting future root recovery | Provide a dedicated area for mortar mixing (etc.) with a suitably thick plastic (impermeable) membrane to prevent chemicals leaching.<br><br>Provide a spare reservoir of water close by to wash away spillages |

## 3.2 Proposed tree works

3.2.1 The proposed development will not require the removal or pruning of any of the trees.

## 3.3 Changes to soil levels

3.3.1 There are no changes to soil levels proposed within the RPA's of trees to be retained.

## 3.4 The Impact of Movement around the Site

3.4.1 The tree protection plan (appendix 4) shows where fencing is to be erected prior to the commencement of works on the site. The fencing takes account of the need to provide a working space around the building.

3.4.2 In order to protect the surface of the soil around the working space, that is not otherwise fenced off, ground protection must be put in place to prevent soil compaction and erosion. The installation of appropriate ground protection measures is addressed in the method statement.

## 3.5 The Impact of Excavations

3.5.1 The excavations are expected to include traditional strip foundations.

3.5.2 The excavations for the new building will encroach onto the root protection area of the neighbouring false acacia tree (T1). The extent of the incursion here amounts to 24m$^2$ out of a total RPA of 221m$^2$, or 11%. Of this, the actual building amounts to 10.5m$^2$ or just 4.5% of the RPA.

3.5.3 The remaining incursion arising from the patio can be addressed by using a cellular confinement product to avoid any excavations, thereby protecting the roots in this area. The patio can be constructed as a dry joint patio, allowing rainwater to continue to pass through the slabs to the roots below.

3.5.4 There is some incursion by the proposed parking spaces onto the RPA of the sycamore (T2). However it is considered that this tree is of such low value that there is no justification in requiring special measures to be taken to further minimise the impact of construction.

3.5.5 Although the routing of services has not been detailed, it is expected that services and drains will be connected beneath the proposed driveway, thereby avoiding the trees.

## 3.6 The Impact of Construction Site Activities

3.6.1 The main site working area will be established on the front drive of the houses away from the RPA's of trees. Materials will be taken to the rear of the site by hand or wheelbarrow (or similar).

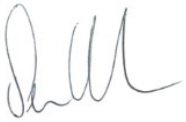
3.6.2 Working space around the house has been accounted for to allow for working areas including the erection of scaffolding. Working areas will be covered by ground protection matting.

3.6.3 Deliveries will be made by means of the new driveway off Copperfield Avenue. Materials are to be set down at the front of the houses where they can either remain in situ until needed, moved to a more appropriate area or be brought under cover if necessary.

3.6.4 The hard standing area at the front of the site is to be used for the storage of cement and plaster bags hazardous chemicals and petrochemical products and will also provide a suitable area for mortar mixing in line with COSHH regulations to ensure there is no detrimental effect on trees.

## 3.7 Summary

3.7.1 The proposed houses can be built with minimal impact to the surrounds. Full provision can be made for the protection of all trees to remain in order to ensure their continued viability following the completion of construction.



**Simon Hawkins Dip Arb L6 (ABC), ND Arb, MArborA**

# Appendix 1 - Tree Survey Methodology

1. The ground level survey of the trees has been carried out in accordance with the criteria set out in Chapter 4 of B.S 5837. The survey has recorded information relating to all those trees within the site and those adjacent to the site which may be of influence on the proposals.
2. The purpose of this report is to modify the recommendation found in the tree constraints schedule for the future use of this site. Where applicable, trees with significant defects have been highlighted and appropriate remedial works have been recommended. However, this report should not be seen as a substitute for a full *Safety Survey* or *Management Plan* which are specifically designed to minimise risk and liability associated with the responsibility for trees. No climbed inspections or specialist decay detection were undertaken.
3. Evaluation of tree condition within the assessment applies to the date of survey and cannot be assumed to remain unchanged. It may be necessary to review these within 12 months in accordance with sound arboricultural practice as recommended by the National Trees Safety Group guidance 'Common Sense Risk Management for Trees'.
4. Trees have been divided into one of four categories based on Table 1 of B.S.5837, '*Cascade chart for tree quality assessment'*. For a tree to qualify under any given category it should fall within the scope of that category's definition.

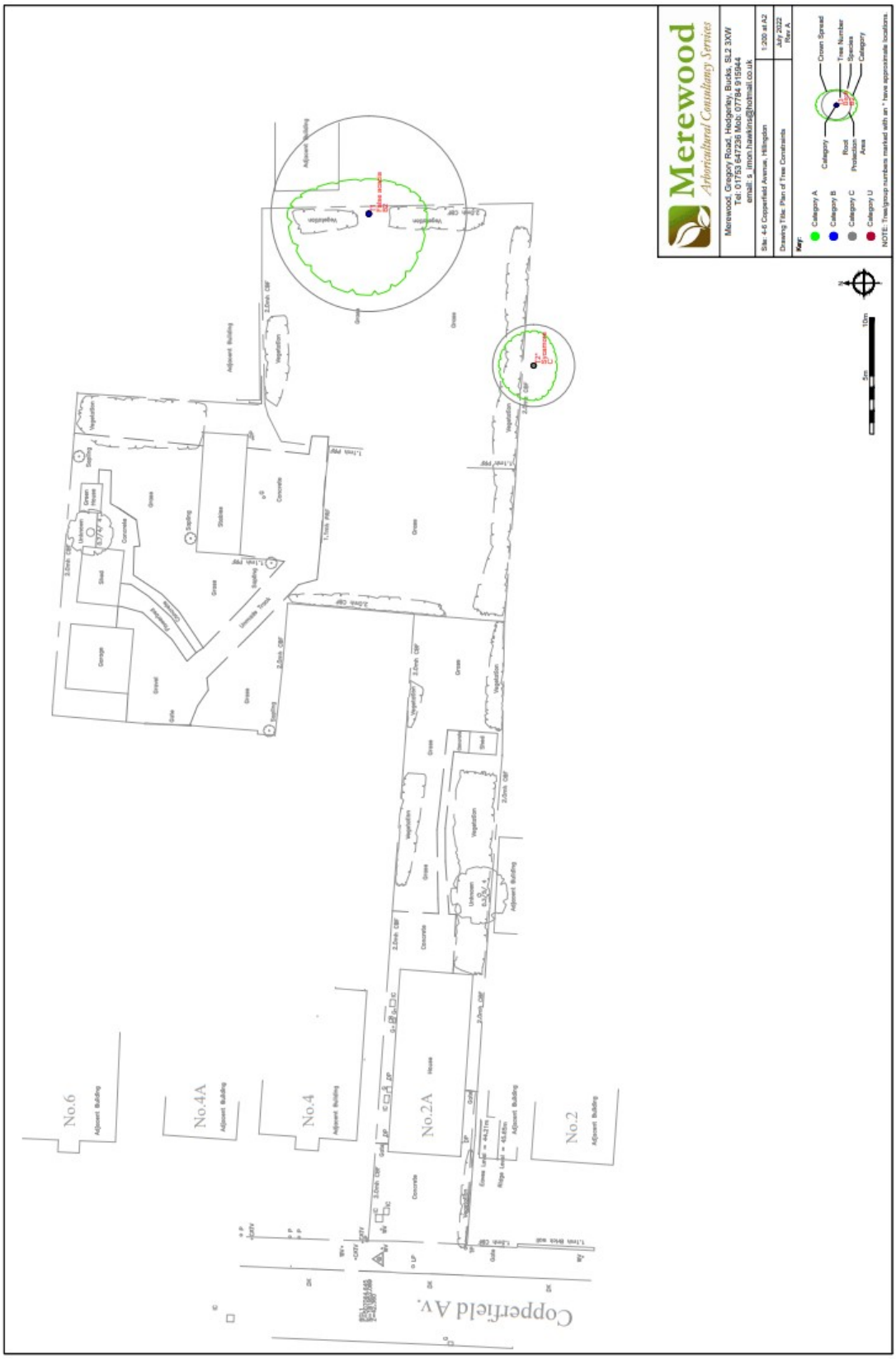
| | |
|---|---|
| ***Category U - Red*** | Trees in such a condition that they cannot realistically be retained as living trees in the context of the current land use for longer than 10 years. |
| ***Category A - Green*** | **Those trees of the highest quality and value**: in such a condition as to be able to make a substantial contribution (a minimum of 40 years is suggested). |
| ***Category B - Blue*** | **Trees of moderate to high quality and value**: in such a condition as to be able to make a significant contribution (a minimum of 20 years is suggested). |
| ***Category C - Grey*** | **Trees of low quality and value**: currently in adequate condition to remain until new planting could be established (a minimum of 10 years is suggested), or young trees with a stem diameter of below 150mm |
| ***Subcategory 1*** concerns mainly arboricultural values, how good a specimen is in terms of form and physiological condition; the value of a tree as a component in a group or in a formal or semi-formal arboricultural feature such as an avenue. | |
| ***Subcategory 2*** concerns mainly landscape values and considers the importance of a tree or group of trees as an arboricultural or landscape feature. Trees present in larger numbers, such as woodlands for example may attract a higher rating than they would as individuals because of their collective value. | |
| ***Subcategory 3*** concerns mainly cultural values including conservation, historical, commemorative, or other value such as veteran or wood pasture. | |

5. RPA's of single stemmed trees are calculated according to the following formula:
   RPA radius = 12 x stem diameter (measured at 1.5m above ground level)
6. Where a tree has more than one stem, the equivalent single stem diameter is usually recorded. This is calculated by adding the squares of the stems and then finding the square root of the total. The radius of the RPA is then calculated by multiplying the equivalent stem diameter by 12 (ref B.S. 5837:2012 para 4.6.1). Where access is restricted an estimate of the stem diameter is provided and this is indicated in the appropriate column.

# Appendix 2
# Schedule of tree constraints

| Tree no | Species | Height | Stem diameter | Crown spread | | | | Physiological condition | Structural condition | Age | Observations/ Management recommendations | Life expectancy | Category |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | North | South | East | West | | | | | | |
| T1 | False acacia | 15 | 700 | 7 | 5 | 3 | 7 | F | F | M | Fungal fruit body on north side of stem. Further investigation recommended | 20 - 40 | B2 |
| T2 | Sycamore | 10 | 3 x 170 | 3 | 2 | 3 | 3 | F | F | M/A | | 40+ | C |

# Appendix 3
# Plan of Tree Constraints



# Appendix 4
# Arboricultural Method Statement

## 1.0 Erection of fencing

1.1 The tree protection plan (appendix 1) shows the line and position of the root protection fencing to be erected prior to any other works taking place on site.

1.2 The root protection fencing installation shall be approached from within the central working zone to avoid damage within the root protection area itself, in accordance with the recommendations of BS 5837/2012, illustrated by Fig. 1.

1.2.1 The fencing for the root protection zones shall be constructed of scaffold tube uprights (set at 3m intervals with diagonal braces driven securely into the ground). Thereafter 'Heras' type fencing shall be attached to the scaffold framework using either steel strapping or scaffold clamps. The fencing shall comply with the requirements of the British Standard B.S. 5837:2012 'Trees in relation to design, demolition and construction - Recommendations'.

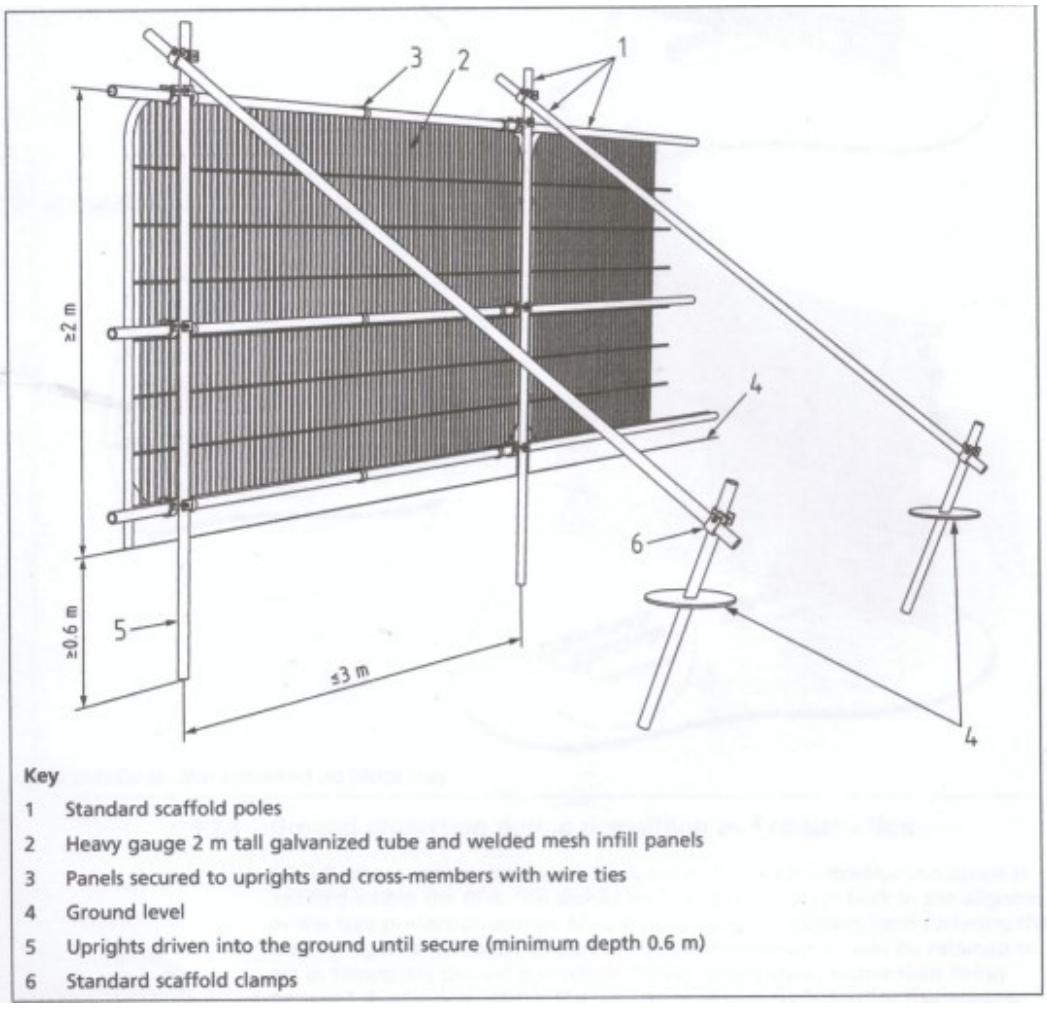



Fig. 1 Protective fencing in accordance with B.S. 583

1.2.2 The fenced off areas are to be regarded as a Construction Exclusion Zone (CEZ). This area is to be considered sacrosanct and strictly off limits to any construction activity including any movement of machinery, storage of materials or parking of contractors' vehicles.

1.2.3 The fencing protecting the RPA is not to be moved under any circumstances unless this has been specifically detailed in the AMS or agreed on site with the arboricultural consultant present.

1.2.4 Ignoring the fencing barriers may constitute a breach of the planning permission and may also be regarded as in contravention of any formal tree protection that applies (Tree Preservation Orders/ Conservation Areas).


Fig 2. Signage attached to fencing reinforces the protection afforded by these barriers

1.2.5 There is to be no burning of any materials or substances within 10m of the root protection barriers.

1.2.6 There is to be no storage of cement bags, chemicals or any other toxic or potentially toxic substances within the CEZ.

1.2.7 Once the fencing has been properly installed, the retained arboricultural consultant will visit the site to confirm the correct installation of the fencing.

1.2.8 The installation of the fencing will be photographed and recorded and a record of this will be passed on to the arboricultural officer at the Local Authority.

**1.3 Installation of ground protection**

1.3.1 Where indicated on the tree protection plan ground protection shall be put in place to provide a surface for pedestrian traffic only.

1.3.2 The ground protection shall consist of a geotextile membrane laid across the

area, which is then covered by a layer of wood chips at least 150mm thick.

1.3.3 Scaffold boards shall then be placed onto the wood chips layer and firmly butted up close to one another. These are to be held in place with steel pins.

Fig 3. Scaffold boards on top of wood chips serving as ground protection. Note the geotextile layer underneath

## 1.4 Storage of materials

1.4.1 Materials are to be delivered by way of the front entrance to the building and taken by hand to the rear where they are needed.

## 1.5 Mortar mixing

1.5.1 Concrete and mortar will be mixed to the rear of the building in a dedicated area within the confines of hard surfaced areas.

1.5.2 All mortar mixing and handling of any other hazardous materials shall take place outside the rpa's of trees. Water run-off from the cleaning of concrete mixers is to be directed away from rpa's and should take place as far from trees as possible.

1.5.3 A confinement area controlling the run-off shall be installed, incorporating an impermeable layer of strong plastic sheeting help within a raised bed. Washing of cement mixers shall take place only within the confined area.

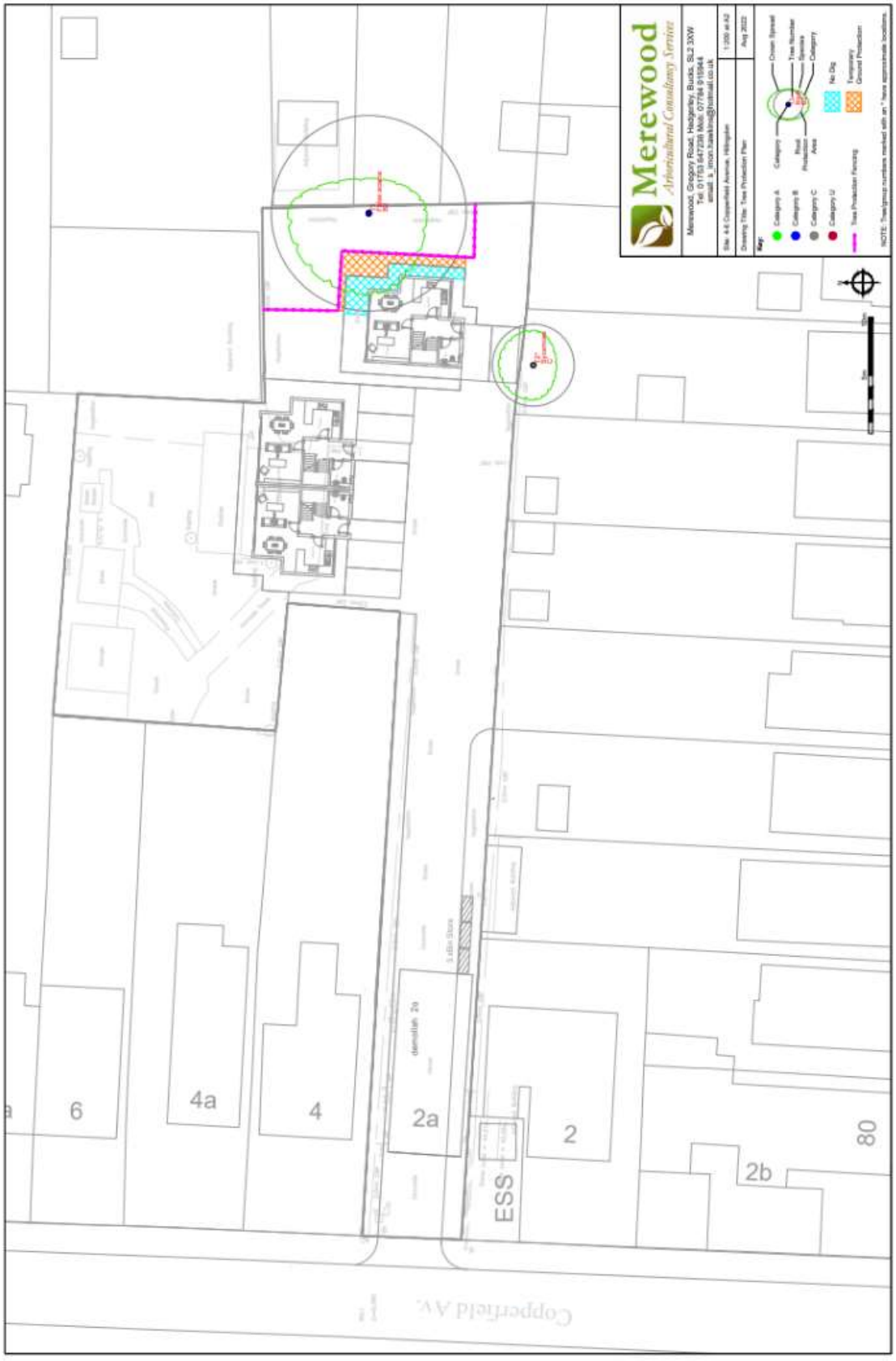
## 2.0 Post construction

### 2.1 **Final removal of tree protective fencing**

2.1.1 Following the conclusion of all construction operations, scaffolding, protective fencing and ground protection measures will be removed to allow for landscaping operations such as the construction of the patio to take place.

2.1.2 Great care is needed at this stage from ground work contractors to continue to observe tree protection requirements. No machines are to be used within rpa's which specifically includes rotovators.

# Appendix 5
# Tree Protection Plan



# Appendix 6
# Qualifications and experience

- I am Simon Hawkins, proprietor of Merewood Arboricultural Consultancy Services.

- I hold the Level 6 Professional Diploma in Arboriculture. This is the highest level of award in the industry.

- I hold the National Diploma in Arboriculture which I attained in 1987. I have studied and practised Arboriculture for over 30 years, during which time I have been involved with both the private and public sector.

- I hold the LANTRA award for professional tree inspections

- I hold professional member status of the Arboricultural Association (M. Arbor A.), recognised as a higher vocational level within the industry.

- I have undertaken an intensive course in the principles and application of VTA Visual Tree Assessment. I have been assessed and found to have attained the advanced level of technical competence of a VTA Practitioner with Elite Training.

- I have over 18 years' experience working in the public sector, during which time I have dealt with all aspects of trees and development in the town planning context, within the inner city; in a greater London Borough; and in the Green Belt. Typically, I have worked with planners, developers, architects and other professionals in the construction industry in which I provide advice and assistance in dealing with arboricultural matters.

- I have appeared at numerous appeals, informal hearings and public enquiries to make formal representations. I have also appeared as an expert witness in court with regard to breaches of a Tree Preservations Order.