



ARBORICULTURAL IMPACT ASSESSMENT, METHOD STATEMENT AND TREE PROTECTION PLAN

**Kilnwood Cottage
Huntsland
Turners Hill Road
RH10 4HB**

Document date: 17th January 2024

Document ref: PJC/6477/23-01 Rev 01

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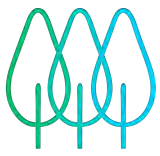
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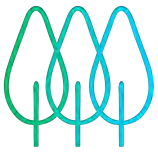
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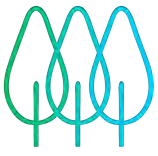


CONTENTS

EXECUTIVE SUMMARY	5
1 INTRODUCTION	6
1.1 Instruction	6
1.2 Objectives of report.....	6
1.3 Contents of report	6
1.4 Documents and information provided.....	6
1.5 Limitations of report	7
2 INITIAL TREE SURVEY	8
2.1 Tree survey information	8
2.2 Tree categorisation	8
2.3 Root protection areas	9
2.4 Site visit.....	9
2.5 Site layout.....	10
2.6 Findings.....	10
2.7 Statutory tree protection.....	10
3 ARBORICULTURAL IMPACT ASSESSMENT	11
3.1 The proposals	11
3.2 Tree removals	11
3.3 Access facilitation pruning.....	11
3.4 Building footings in proximity to trees.....	11
3.5 Hard standing in proximity to trees.....	11
3.6 Services	12
3.7 Landscaping in proximity to trees	12
4 ARBORICULTURAL METHOD STATEMENT.....	13
4.1 General requirements	13
4.2 Phasing of works	13
4.3 Initial tree works.....	13
4.4 Tree protection barriers	14
4.5 Storage and handling of harmful chemicals.....	15
4.6 Contractor facilities.....	15
4.7 Replacing existing patio within root protection area of T12.....	15
4.8 Constructing new hard standing and gym footing within root protection areas of T12, T15 and T16	15
4.9 Installing new permanent fencing within root protection areas	16



4.10	Soft landscaping within root protection areas of T15/T16	16
4.11	Pre-commencement arboricultural input.....	16
4.12	Arboricultural monitoring.....	17
4.13	Process if an unforeseen issue relating to trees arises.....	17
Appendix 1: Tree Constraints Plan		18
Appendix 2: Tree Survey Schedule		19
Appendix 3: Tree Retention Plan		20
Appendix 4: Root Protection Area Incursions Plan		21
Appendix 5: Tree Protection Plan.....		22
Appendix 6: Tree Protection Fencing Specification		23
Appendix 7: Example Protective Fencing Sign		24



EXECUTIVE SUMMARY

PJC Consultancy has been instructed by Made Architects to provide an arboricultural impact assessment and arboricultural method statement to support a full planning application at Kilnwood Cottage for a first floor extension, pool, gym and pergola structures.

This report complies with the planning policies of Mid Sussex District Council and complies with the recommendations of British Standard BS5837: 2012 Trees in relation to design, demolition and construction – Recommendations.

The survey was carried out on 16th November 2023. The tree constraints plan and tree survey schedule can be found at Appendix 1 and Appendix 2 respectively.

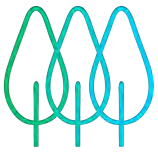
No tree preservation order (TPO) protects the trees at this site and the site is not located within a conservation area.

The proposed layout has been overlaid with the tree constraints plan in order to identify the impacts to the trees to inform this impact assessment and this information has formed the basis of the tree retention plan at Appendix 3, the root protection area incursions plan at Appendix 4 and the tree protection plan at Appendix 5.

One category C Prunus requires removal to facilitate the proposals. The proposed landscape plan indicates new planting will occur on the northern site boundary. There is space here for new planting which will adequately replace the tree being removed. The detailed planting specification could readily be secured by appropriate planning condition.

The proposals include the installation of new/replacement hard standing and the footing of a new outbuilding within the root protection areas of retained third party trees. Sympathetic construction methodologies specified in this report will need to be implemented to protect these trees.

Subject to the generic and specific tree protection measures recommended within the arboricultural method statement at section 4 of this report being adhered to, I consider that the proposals represent a negligible impact on the amenity of the locality in so far as it is contributed to by trees.



1 INTRODUCTION

1.1 Instruction

- 1.1.1 PJC Consultancy has been instructed by Made Architects to provide an arboricultural impact assessment and arboricultural method statement to support a full application for a first floor extension, pool, gym and pergola structures.
- 1.1.2 This report complies with the planning policies of Mid Sussex District Council and complies with the recommendations of British Standard BS5837: 2012 Trees in relation to design, demolition and construction – Recommendations (the British Standard).

1.2 Objectives of report

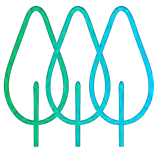
- 1.2.1 This report has been undertaken with the following objectives:
- To survey all trees within and adjacent to the site with trunk diameters of 75mm or more at a height of 1.5m.
 - To assess the quality and value of the existing tree stock in terms of arboricultural, landscape, historical/conservation, or public amenity value.
 - To provide information relating to planning constraints that may restrict works to trees at the site.
 - To identify the tree removals and pruning works that will be required as a result of the proposed development and to assess the impact of the tree works.
 - To assess the potential impact the proposed construction works will have on retained trees and provide recommendations for mitigation measures to reduce the impact on the trees.
 - To provide a protection methodology for retained trees throughout the demolition and construction period, including the above ground and below ground parts of the trees as well as their rooting medium.

1.3 Contents of report

- 1.3.1 This report includes:
- A tree constraints plan and tree survey schedule at Appendices 1 & 2 respectively.
 - An arboricultural impact assessment at section 3, a tree retention plan at Appendix 3 and a root protection area incursions plan at Appendix 4.
 - An arboricultural method statement at section 4 and a tree protection plan at Appendix 5.

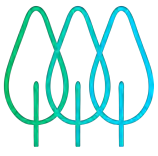
1.4 Documents and information provided

- 1.4.1 The following documents were used to aid the preparation of this report:
- Site Location Plan Ref: 100
 - Block Plan Ref: 110
 - Proposed Site Landscape Plan Ref: 200 Rev C.
 - Proposed Gym Plans and Elevations ref: 232



1.5 Limitations of report

- 1.5.1 The following arboricultural impact assessment and method statement have been prepared for the proposal stated in section 1.1 and using the plans and information listed in section 1.4. The report should not be relied upon if the stated proposal or proposed design changes unless the author confirms the changes do not have a bearing on the arboricultural impacts or recommended mitigation measures.
- 1.5.2 The survey methodology was restricted to a visual tree assessment from ground level. No tree climbing or invasive ground investigation was carried out for this report. Where existing site constraints are present such as ivy covered trees, a very dense under-storey, or where trees are located on third party land to which access was not granted, tree dimensions were estimated by eye as accurately as possible.
- 1.5.3 The tree survey represents a preliminary overview of the condition and value of trees at the site. It is not a detailed assessment of any individual tree and although management recommendations are included, this report will not be sufficient to be used as a detailed condition and safety survey.
- 1.5.4 The information and measurements in this report are representative of the date of the site visit. The tree survey data will need to be updated to reflect tree growth and changes in the condition of the trees after prolonged periods.



2 INITIAL TREE SURVEY

2.1 Tree survey information

2.1.1 The following information was recorded in the tree survey schedule for each individual tree (average dimensions are recorded for groups):

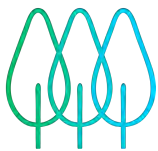
- Tree reference number. (T=tree, G=group, H=hedgerow). Tree numbers suffixed with PA on the tree constraints plan indicate that the tree position is approximate.
- Species (common and scientific name).
- Overall tree height (m).
- Stem diameter (mm) per stem or average diameter for multi-stemmed trees with six or more stems.
- Branch spread (m) measured to the four cardinal points.
- Existing height (m) above ground level of lowest significant branch and direction of growth (for individual trees only).
- Existing height (m) above ground level of canopy.
- Age class (young, semi mature, early mature, mature, over mature or veteran).
- Physiological condition (good, fair, poor).
- Structural condition (good, fair, poor).
- Comments (general description of tree(s) including any notable features).
- Tree categorisation (see below).
- Root protection area (m²).
- Root protection radius (m).

2.2 Tree categorisation

2.2.1 The condition and value of each tree was evaluated based on the current land use. Each tree or tree group has been awarded either category A, B, C or U and a subcategory of either 1,2 or 3 or a combination of the subcategories.

2.2.2 Tree categorisation summary:

- A – Trees of good condition and high arboricultural, landscape or conservation value. Must have a potential life span in excess of forty years.
- B – Trees of moderate condition, with minor defects or sub-optimal form but are still of modest arboricultural, landscape or conservation value. Must have a potential life span in excess of twenty years.
- C – Unremarkable trees of poor condition or form with limited arboricultural, landscape or conservation value, or trees with a stem diameter under 150mm. Must have a potential life span in excess of ten years.
- U – Trees of such impaired condition that they cannot realistically be retained as living trees in the context of the current land use for more than ten years. These trees do not need to be removed if they are not dangerous and do not conflict with the proposed development, but should not be considered a constraint to development.



2.2.3 Tree sub categorisation summary:

- 1 – Trees have mainly arboricultural value, e.g. trees of good condition, form and vitality or rare tree species.
- 2 – Trees have mainly landscape value, e.g. trees of landscape prominence, that serve to screen unsightly views or that are required for privacy. Also trees present in groups that attain higher collective rating that they would as individuals.
- 3 – Trees with mainly cultural value including conservation, e.g. commemorative trees, trees of historical significance or veteran trees.

2.2.4 Each tree can only be categorised as A, B or C but may comply with more than one subcategory.

2.3 Root protection areas

2.3.1 A root protection area represents a calculation of the minimum volume of rooting medium required to support a tree. It is a standardised calculation based on the stem diameter(s) measured at 1.5m and is not necessarily representative of the actual root spread or total rooting area of a tree. The formulas used to calculate root protection areas are shown below:

Table 1: Root protection area formulas

Number of stems	Root protection area formula
Single stemmed trees	$\frac{(\text{stem diameter (mm)} \times 12)^2 \times \pi}{1000}$
Trees with two to five stems	$\sqrt{(\text{stem diameter } 1)^2 + (\text{stem diameter } 2)^2 \dots + (\text{stem diameter } 5)^2}$
Trees with more than five stems	$\sqrt{(\text{mean stem diameter})^2 \times \text{number of stems}}$

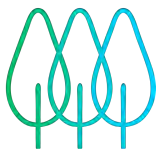
2.3.2 The root protection areas are plotted onto the tree constraints plan in Appendix 1 and are recorded in the tree survey schedule in Appendix 2. These are represented as a circle on the plan (unless significant rooting constraints are present), and are colour coded depending on the category the tree has been awarded. Where existing site conditions/features are present that are deemed likely to have affected the root morphology, the root protection areas have been represented as a polygon of equivalent area.

2.3.3 The disturbance of a tree's root system can result in crown dieback and even death of the tree. Roots are used to support the tree structurally as well as the absorption of moisture and nutrients from the soil. They also act as storage and transport for water and nutrients. It is therefore important to protect roots and their ability to function during the construction period and post development.

2.3.4 The majority of root growth is usually found within the top 600mm of soil. As such, even a shallow disturbance within a root protection area can potentially have a significant impact on the tree.

2.4 Site visit

2.4.1 A site visit was carried out on 16th November 2023. The weather conditions at the time were cloudy with light rain showers. The visibility was adequate for visual tree inspection from ground level. Deciduous trees were in partial leaf.



2.5 Site layout

- 2.5.1 The site is comprised of a detached dwelling with front and rear gardens connected by paths on the east and west sides of the dwelling. There is a gated driveway with garage block to the south of the dwelling. The rear garden has an existing patio and has largely been cleared of vegetation. The majority of trees at the site are comprised of high hedgerows on the site boundary and larger third party trees around the curtilage of the site. The most significant arboricultural feature within the site is a mature oak (T4) located on the road frontage.

2.6 Findings

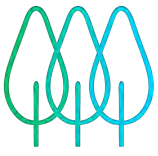
- 2.6.1 A total of ten individual trees, two tree/shrub groups and nine hedgerows were surveyed. Their locations are shown on the tree constraints plan at Appendix 1 and details and measurements are shown in the tree survey schedule at Appendix 2.
- 2.6.2 A summary of their British Standard categorisation is shown at Table 2 below.

Table 2: Tree categorisation summary

Tree category	Individual tree	Tree group	Hedgerow
A	4	-	-
B	3	-	1
C	3	2	8
U	-	-	-
Total	10	2	9

2.7 Statutory tree protection

- 2.7.1 Mid Sussex District Council's online mapping tool was used on 28th November 2023 to check whether there are any tree preservation orders (TPOs) within the site. No TPOs were shown within or immediately adjacent to the site.
- 2.7.2 However, the online mapping tool can be updated at any time, therefore any persons proposing to undertake tree works should still check the status of the trees with the local planning authority prior to undertaking any tree works. Failure to adhere to the TPO legislation could lead to prosecution and if convicted a fine and criminal record. The crown of a tree and its roots are protected. The person carrying out the works, the person instructing the works and the Directors of that company are potentially liable. Failure to check whether tree/s are the subject of TPO/s could not be used as mitigation.
- 2.7.3 The site is not in a Conservation Area.



3 ARBORICULTURAL IMPACT ASSESSMENT

3.1 The proposals

- 3.1.1 The proposed layout has been overlaid with the tree constraints plan in order to identify the impacts to the trees to inform this impact assessment and this information has formed the basis of the tree retention plan at Appendix 3, the root protection area incursions plan at Appendix 4 and the tree protection plan at Appendix 5.
- 3.1.2 The proposals include the replacement and extension of the rear patio to include a new swimming pool and outdoor lounge. Additionally, a new footpath shall be constructed to the north-west corner of the site where a new gym will be constructed.

3.2 Tree removals

- 3.2.1 The only tree to be removed is a category C Prunus (T17). T17 does not directly conflict with the proposals, however does conflict with the proposed tree planting. T17 is not visible outside of the site so its loss will have no impact on local visual amenity.

3.3 Access facilitation pruning

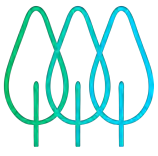
- 3.3.1 Based on the information currently available, it is anticipated that the crowns of all retained trees will be located a sufficient distance from proposed construction activities and expected construction access routes so as not to require pruning.
- 3.3.1 Any requirements for pruning that cannot be predicted at this stage in the design process (e.g. for contractor compound or movement of large or specialist plant machinery) shall be discussed at the pre-commencement meeting with the project arboriculturist and agreed with the local authority arboricultural officer. All works are to be carried out in accordance with BS3998: 2010 Tree works – Recommendations.

3.4 Building footings in proximity to trees

- 3.4.1 The new gym encroaches the root protection area of T15 in the area hatched green on the root protection area incursions plan. A footing for the gym is already in place and comprises of a concrete raft foundation that bears onto the existing ground, however the position of the gym is going to be moved further north to minimise the impact on T15, therefore allowing its retention. The new footing encroaches the root protection area by 2.7m² or 7.2% of the total root protection area, which falls within the maximum tolerance recommended in BS5837: 2012. Within the root protection area, the new footing shall comprise of a concrete raft which must bear onto the existing ground level.

3.5 Hard standing in proximity to trees

- 3.5.1 The existing patio in the rear garden is to be replaced within the root protection area of T12 in the area hatched pink on the root protection area incursions plan. It will also be extended into unsurfaced ground within the root protection area in the area hatched orange on the plan. The additional hard standing encroaches the root protection area by 4.7m² or 1.4% of the existing unsurfaced root protection area. This falls within the maximum tolerance recommended in BS5837: 2012.
- 3.5.2 The new footpath to the gym encroaches the root protection areas of T15 and T16 in the areas hatched orange on the root protection area encroachments plan. The path encroaches the root protection area of T15 by 5.1m² or 14.4% and the root protection area of T16 by 2.2m² or 3.0%.
- 3.5.3 The new hard standing (and ideally the replacement hard standing) within the above root protection areas should be of a permeable design and constructed as specified in the



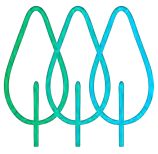
arboricultural method statement. The footpath adjacent to T15 will be located close to the base of the stem where the primary root plate is located so must be built up above the existing ground. This will also allow the path to tie into the floor level of the gym which will also be located above the existing ground level.

3.6 Services

- 3.6.1 A container for the plant for the new swimming pool will partially encroach the root protection area of T12. All underground pipework connecting the plant to the swimming pool should be located outside of the root protection area.
- 3.6.2 Details of the routing of other services for the proposed development (e.g. electric connection to the gym) are not currently available. All underground services should be located outside the root protection areas of retained trees. Sympathetic methodology to enable the installation of services within root protection areas (in certain instances) is available, however there will always be a potential arboricultural impact and arboricultural advice must be sought regarding the suitability of these methods before they are relied upon. If it is achievable, root protection areas should always be completely avoided.

3.7 Landscaping in proximity to trees

- 3.7.1 It is proposed to construct rustic oak feather edge fencing on the rear garden boundary, which will encroach the root protection areas of T15 and T16. This must be installed sensitively as described in the arboricultural method statement.
- 3.7.2 It is anticipated that turfing/seeding will occur throughout the soft landscape in the rear garden, so will occur within the root protection areas of T15 and T16. This must occur sensitively as described in the arboricultural method statement.



4 ARBORICULTURAL METHOD STATEMENT

4.1 General requirements

- 4.1.1 The arboricultural method statement and tree protection plan shall remain on site for the duration of construction and landscaping works and be available to site operatives at all times. All operatives at the site shall be briefed about tree related factors as part of their site induction.
- 4.1.2 Any variation from the methodology described in this method statement shall be discussed with the supervising arboriculturist and agreed with the local authority arboricultural officer.

4.2 Phasing of works

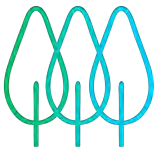
- 4.2.1 To ensure trees are protected throughout the development, the proposed development shall occur in the following order:

Table 3: Phasing of works

Works Order	Operation	Notes
1	Initial tree works.	The tree works contractor shall undertake the tree removals specified in the arboricultural impact assessment.
2	Installation of tree protection barriers.	Tree protection fencing and temporary ground protection shall be installed in the locations shown on the tree protection plan and to the specification described in this method statement.
3	Pre-commencement sign off.	The project arboriculturist shall sign off the above pre-start arboricultural works prior to further construction and hard landscaping works occurring.
4	Construction phase.	The tree protection barriers shall be maintained, and the construction exclusion zones observed throughout the construction phase. The temporary ground protection within the root protection areas of T15 and T16 shall be removed when it is replaced with new hard standing.
5	Soft landscaping phase.	The remaining tree protection barriers shall be dismantled when construction and hard landscape operations have been completed and plant machinery or excess construction materials have been removed from site. Soft landscape operations shall occur sensitively as described in this method statement.

4.3 Initial tree works

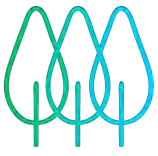
- 4.3.1 The tree removal specified in the arboricultural impact assessment shall be carried out as the first stage of development. Any requirements for access facilitation pruning which have not been anticipated on the date of this report shall be discussed at the pre-commencement sign off meeting with the project arboriculturist and be communicated to the local authority arboricultural officer.
- 4.3.2 If bonfires are lit to dispose of arisings from the tree works, an assessment of wind direction and strength shall be made to ensure flames cannot extend within 5m of any part of a retained tree. No bonfires shall be lit within a root protection area.
- 4.3.3 Trees should be checked for protected species before works are undertaken. It is against the law to disturb bats or their roosts under the Conservation of Habitat and Species Regulations. Nesting birds are protected by the Wildlife and Countryside Act. If protected species are discovered, Natural England should be contacted for advice.



- 4.3.4 The tree works contractors should carry out all tree works to BS3998: 2010 Tree works – recommendations as modified by research that is more recent. They should also carry relevant, adequate and up to date insurance.
- 4.3.5 It is suggested that an Arboricultural Association approved contractor carry out all tree works. Approved contractors are expected to work to industry best standards. The Arboricultural Association website (www.trees.org.uk) contains contact details and information on engaging a suitable contractor.

4.4 Tree protection barriers

- 4.4.1 The root protection areas of retained trees must be left free from disturbance, and protected from contamination or compaction during the proposed works. Protection shall comprise a combination of tree protection fencing and temporary ground protection.
- 4.4.2 The tree protection fencing and the temporary ground protection adjacent to T15/T16 shall be installed and signed off by the project arboriculturist before any plant activity, ground works or construction activities commence at the site. The tree protection fencing shall be maintained in situ until the soft landscaping phase of development when all other construction activities in the vicinity have been completed, and excess construction materials and plant machinery have been removed from site. The temporary ground protection within the root protection areas of T15/T16 shall be removed when it is replaced with new hard standing and the ground protection within the root protection area of T12 is only required between the time the existing patio is removed and the replacement patio is constructed. Any damage that occurs to the tree protection barriers during the construction period must be rectified immediately, prior to other construction activities recommencing in the vicinity.
- 4.4.3 The specification for tree protection fencing shall be metal welded mesh panels (e.g. Heras panels), in concrete or rubber feet. The panels shall be supported by metal stabiliser struts mounted on either a base plate secured by ground pins, or in a block tray (refer to Appendix 6). Any variation from this specification for tree protection fencing shall be discussed with the project arboriculturist and agreed in writing with the local authority arboricultural officer.
- 4.4.4 Signs shall be affixed to the fencing as shown in Appendix 7 to explain its purpose. The signs shall be affixed at a reasonable size and frequency to ensure they are easily visible to operatives at the site.
- 4.4.5 The specification for temporary ground protection shall be a single thickness of scaffold boards (or equivalent boards), on a compressible layer (100mm woodchip from the initial tree works or sharp sand), spread across a geotextile membrane. This specification is designed to support pedestrian loads only. If larger loads need to be supported, a more robust ground protection specification shall be agreed with the project arboriculturist.
- 4.4.6 The areas highlighted yellow on the tree protection plan or protected by temporary ground protection shall be referred to as the construction exclusion zones. The following restrictions shall apply within the construction exclusion zones:
- No vehicular access shall be permitted.
 - Regular pedestrian access shall be restricted unless on suitable ground protection measures agreed with the project arboriculturist.
 - No storage of construction materials shall occur.
 - No storage of building spoil or construction debris (including short-term temporary stockpiling) shall occur.
 - No harmful chemicals shall be stored or handled.
 - No fires shall be permitted.



- No mechanical excavation including regrading of levels shall occur.
- There shall be no change in ground level unless undertaken under the supervision of the project arboriculturist.
- No construction activities including installation of new permanent hard standing shall be undertaken.

4.5 Storage and handling of harmful chemicals

- 4.5.1 Provision must be taken to prevent the storage and handling of harmful chemicals within the root protection areas of retained trees. Harmful chemicals include fuels, oils, bitumen, builder's sand (which has a high salt content) and cement. Provision shall also be made to prevent the storage and handling of harmful chemicals in areas proposed for further planting if the existing soil is intended to be retained.
- 4.5.2 Cement mixing shall always occur outside the construction exclusion zones. If cement mixing is to occur close to the construction exclusion zones, or there is the potential for cement washings to leech into a root protection area, adequate, bunded ground protection measures must be used. This could comprise impermeable plastic sheeting under wooden boards (to prevent tears) surrounded by a raised lip.
- 4.5.3 All other chemicals that are harmful to trees must be stowed in suitable containers and stored away from the construction exclusion zones unless adequate, bunded ground protection measures are implemented to prevent spillages leeching into root protection areas.

4.6 Contractor facilities

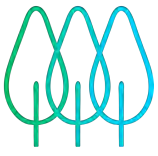
- 4.6.1 Contractor parking and delivery of construction materials shall occur on the front driveway. Access to the rear garden shall be along the existing hard standing to the west of the dwelling.

4.7 Replacing existing patio within root protection area of T12

- 4.7.1 The existing patio surface within the root protection area of T12 shall provide ground protection for construction traffic. Access across the root protection area shall be prohibited between the time the existing surface is removed and the new surface is installed unless additional ground protection measures are implemented as described in 4.4.
- 4.7.2 The existing paving wearing course shall be broken up using controlled hand tools (e.g. metal bar or pneumatic breaker) and removed from the root protection area by hand. If it is deemed impractical or unsafe to achieve this using hand tools only, plant machinery operated under the supervision of the project arboriculturist may be used instead. The machine must be fitted with a grading bucket (without teeth) and be operated from outside the root protection area unless on a retained area of hard standing. If roots are revealed during this operation, use of the machine must immediately cease, and the operation shall be continued by hand.
- 4.7.3 The existing sub-base shall be reused (augmented as necessary) for the new patio. If it is deemed necessary to remove any of the sub-base to enable the correct levels for the finished surface, removal of the sub-base must occur carefully in shallow increments following the same methodology required for removing the wearing course.

4.8 Constructing new hard standing and gym footing within root protection areas of T12, T15 and T16

- 4.8.1 The new hard standing and gym footing within the root protection areas of T12, T15 and T16 (areas hatched orange and green on the root protection area incursions plan) should bear onto the existing ground level without soil stripping. If this is not feasible due to the need



for the levels to tie into the existing house adjacent to T12, any soil stripping will need to occur carefully using hand tools. Roots revealed shall be cleanly pruned using secateurs to leave the smallest feasible wound. Small clean pruning wounds require less energy from the tree to heal and reduce the chance of infection by tree pathogens. Roots over 25mm diameter must not be pruned unless the project arboriculturist has first been consulted to assess the potential impact on the trees.

4.9 Installing new permanent fencing within root protection areas

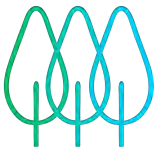
- 4.9.1 Installation of permanent fencing within the root protection areas of T15/T16 will require access into the construction exclusion zone. Only pedestrian access will be permitted into the construction exclusion zone and scaffold board pathways shall be used in wet conditions. Ideally this shall occur during the soft landscaping phase of development when it is safe to dismantle the tree protection fencing.
- 4.9.2 Within the root protection area, the postholes shall be hand excavated with care taken to avoid damaging or severing roots with a diameter greater than 25mm. Ideally the postholes shall be pre-dug to ensure significant roots can be avoided. The postholes shall be sleeved with impermeable sheeting before any concrete is added to prevent alkaline burn to retained roots. Cement mixing shall occur outside the construction exclusion zones.

4.10 Soft landscaping within root protection areas of T15/T16

- 4.10.1 Soft landscaping within the root protection areas of retained trees shall occur as the final phase of development, when all other construction activities in the vicinity have been completed and it is safe to dismantle the tree protection barriers. It is anticipated that turfing/seeding will occur within the root protection areas of T15/T16.
- 4.10.2 All planting stock, topsoil and other soft landscaping materials shall be stockpiled outside the root protection areas of retained trees. When the tree protection fencing has been dismantled, the extents of the root protection area for T16 shall be made clear to operatives at the site by other means (e.g. ground marker paint or similar). The standard restrictions to works within the construction exclusion zone will still apply during the soft landscaping phase of development.
- 4.10.3 Where new turf or grass seed is to be laid within the root protection area, topsoil may need to be imported. The existing soil may be lightly tilled by hand but use of rotavators or plant machinery will be prohibited. A maximum increase of 100mm of topsoil may be introduced to the root protection area to avoid suffocating existing root growth. Care must be taken to prevent soil being piled against tree buttresses or buttress roots.
- 4.10.4 When soil or other materials are transported across a root protection area in wet conditions, scaffold board pathways must be used to prevent compaction of the rooting medium. It should be noted that even pedestrian traffic can compact the soil in wet conditions.

4.11 Pre-commencement arboricultural input

- 4.11.1 Prior to the commencement of works, arboricultural input will be required for the following aspects of development:
 - 1. To sign off the routing of utility services (if any).
 - 2. To sign off the routing of drainage services (if any).
 - 3. To sign off the specification for the new patio and footpath surfaces within the root protection areas of T12, T15 and T16.
 - 4. To sign off that the pre-commencement tree works have been completed as specified in the arboricultural impact assessment, and to discuss any



requirements for any potential pruning which had not been anticipated prior to the date of this report.

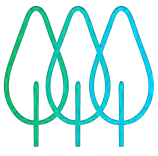
5. To sign off that the tree protection fencing and ground protection have been installed in the correct locations and to the agreed specification.

4.12 Arboricultural monitoring

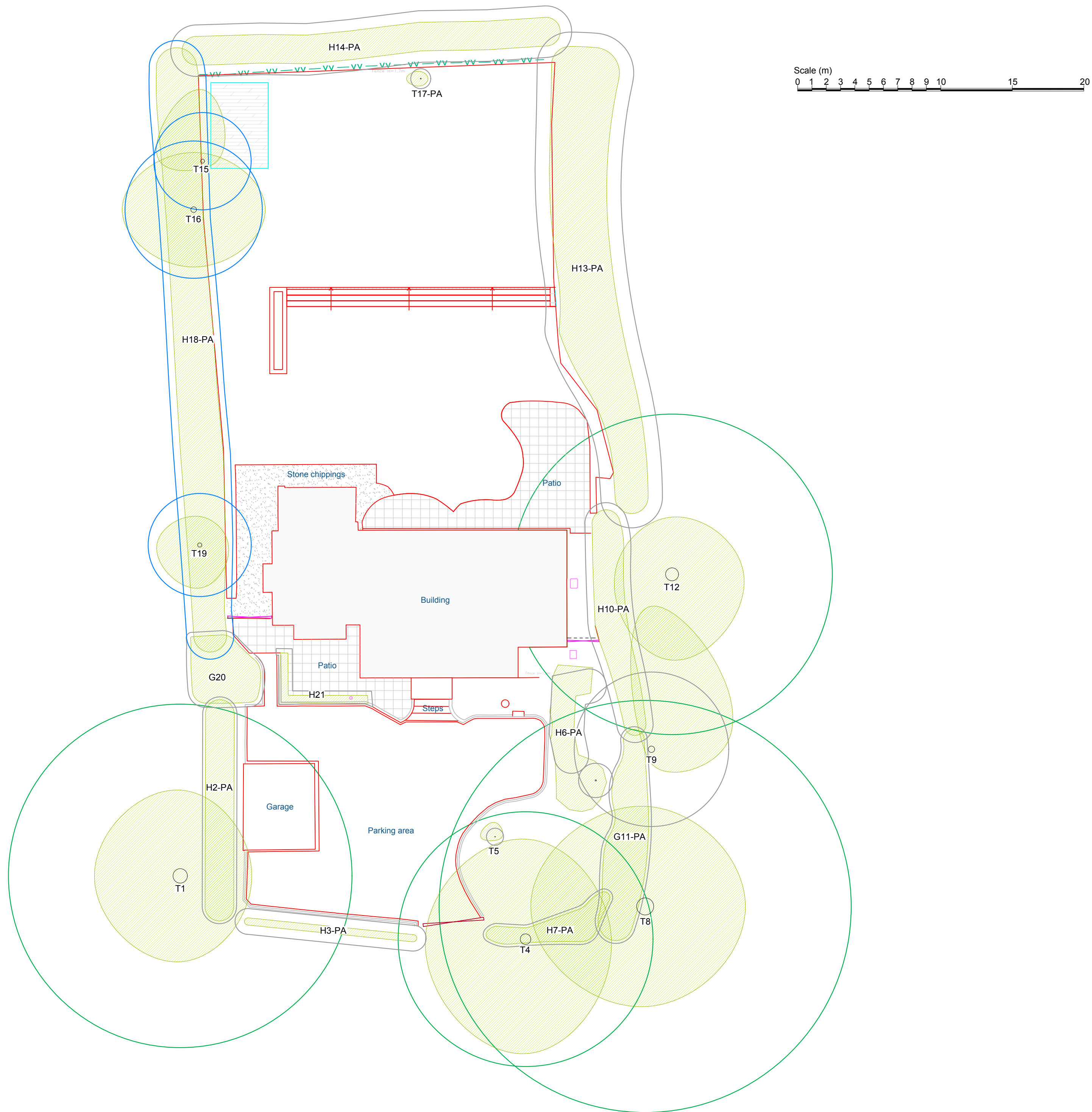
- 4.12.1 The site manager shall provide a monthly update to the project arboriculturist including photographic evidence that the tree protection barriers are intact and that the construction exclusion zones have been observed.

4.13 Process if an unforeseen issue relating to trees arises

- 4.13.1 If significant root growth is disturbed during construction activities that are not within the scope of this report, the work shall cease until the project arboriculturist has been consulted. Roots greater than 25mm in diameter or dense/matted fibrous roots shall be considered significant root growth. It should be remembered that whilst root protection areas are part of industry best practice, tree root growth is influenced by a number of factors and may not conform to expected ideals.
- 4.13.2 If at any time during the construction process, damage is inadvertently caused to a tree, the project arboriculturist shall be notified to assess the likely implications and to prescribe potential remedial measures to be implemented. Damage can be in the form of chemical or fuel spillage, mechanical damage to either the above ground parts of the tree or the roots, fire or any other unforeseen circumstance.
- 4.13.3 The supervising arboriculturist shall be appointed by the contractor. It will be necessary for the arboriculturist to report to the local planning authority on the outcome of the site visits as well as any unforeseen tree related issues.



Appendix 1: Tree Constraints Plan



- Key:**
- Root protection area for category A* tree
 - Root protection area for category B* tree
 - Root protection area for category C* tree
 - Tree canopy

* Tree categorised in accordance with BS 5837:2012 'Trees in relation to design, demolition and construction - Recommendations'.

Tree survey schedule contains further information for each tree.

This drawing should be viewed in colour.

Tree numbers suffixed with PA indicate the tree position is approximate.

Drawing no: PJC/6477/23/A Rev: - Sheet number: 1 of 1

Client and site:
Made Architects

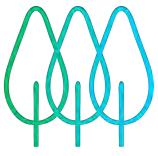
Kilnwood Cottage
Huntsland
Turners Hill Road, RH10 4HB

Drawing title: Tree Constraints Plan

Date drawn: 23/11/2023

Scale: 1:200 at A2

Drawn by: PD Checked by: LW



Appendix 2: Tree Survey Schedule

Site: Kiln wood Cottage

Survey date: 16/11/2023

Surveyor: Peter Davies

Tree Survey Schedule



Tree ref.	Species	Height (m)	Stem diameter (mm)	Branch spread (m)	Crown clearance (m)	Age class	Physiological condition	Structural condition	Comments	Management recommendation	Category grading	Root Protection Area (m ²)	Root Protection Radius (m)
T1	Pedunculate oak (Quercus robur)	20	1000 est	N: 6 E: 5 S: 6 W: 6	Crown: 4 south Branch: 4 north	Mature	Good	Good	Third party tree in private garden, viewed from site and road. All dimensions estimated. Historically reduced over site. Minor tip dieback.	No action required.	A1	452.4	12.0
H2	Leyland cypress (Cupressus X leylandii)	3-4 average	Up to 100 average est	1 average	0 average	Semi mature	Good	Good	Managed garden hedgerow.	No action required.	C2	4.5 average	1.2 average
H3	Mixed (cherry laurel, holly)	2-3 average	Under 75 average	0.5 average	0 average	Semi mature	Good	Good	Managed hedgerow on road frontage. West half comprised of holly and east half comprised of cherry laurel.	No action required.	C2	2.5 average	0.9 average
T4	Pedunculate oak (Quercus robur)	16	740	N: 7 E: 6 S: 8 W: 7	Crown: 3 south Branch: 4 average	Mature	Good	Good	Prominent tree located on road frontage. Slightly suppressed by offsite oak to east not no major visible defects.	No action required.	A1+2	247.8	8.9
T5	Rhododendron (Rhododendron sp.)	2	50 est	N: 1 E: 0.5 S: 0 W: 1	Crown: 0 average Branch: 0 average	Semi mature	Good	Fair	Small garden shrub.	No action required.	C1	1.1	0.6
H6	Mixed (Photinia, Rhododendron)	2.5	Up to 100 average est	1-2 average	0 average	Semi-early	Good	Good	Pruned shrubs screening fuel tank.	No action required.	C2	4.5 average	1.2 average

Site: Kiln wood Cottage

Survey date: 16/11/2023

Surveyor: Peter Davies

Tree Survey Schedule



Tree ref.	Species	Height (m)	Stem diameter (mm)	Branch spread (m)	Crown clearance (m)	Age class	Physiological condition	Structural condition	Comments	Management recommendation	Category grading	Root Protection Area (m ²)	Root Protection Radius (m)
H7	Mixed (Leyland cypress, holly)	2-3 average	Under 75 average	0.5-1 average	0 average	Young-semi mature	Good	Fair	Semi managed hedgerow on road frontage.	No action required.	C2	2.5 average	0.9 average
T8	Pedunculate oak (Quercus robur)	20	1200 est	N: 7 E: 7 S: 7 W: 8	Crown: 5 south Branch: 5 south	Mature	Good	Good	Third party tree viewed from site and road. All dimensions approximate. Large dead wood in crown. Cherry laurel inhibits inspection.	No action required.	A1+2	651.4	14.4
T9	Ash (Fraxinus excelsior)	16	450 est	N: 10 E: 5 S: 1 W: 0	Crown: 6 north Branch: 2 south	Mature	Fair	Poor	Third party tree viewed from site. Extensive bacterial canker on stems. Stem previously failed at 3m. Poor view of tree from within site.	Undertake detailed inspection with access to tree (suggestion only as third party tree).	C1	91.6	5.4
H10	Holly (Ilex aquifolium)	3 average	Up to 150 average est	1 average	0-1 average	Early mature	Good	Good	Managed hedgerow on site boundary.	No action required.	C2	10.2 average	1.8 average
G11	Cherry laurel (Prunus laurocerasus)	3-4 average	Up to 100 average est	1-2 over site	0 average	Semi-early mature	Good	Fair	Third party shrubs overhanging boundary fence.	No action required.	C2	4.5 average	1.2 average
T12	Pedunculate oak (Quercus robur)	15	900 est	N: 4 E: 5 S: 6 W: 4	Crown: 4 south Branch: 4 average	Mature	Good	Good	Third party tree viewed from site. No major visible defects.	No action required.	A1	366.4	10.8 (amended on tree constraints plan)

Site: Kiln wood Cottage

Survey date: 16/11/2023

Surveyor: Peter Davies

Tree Survey Schedule



Tree ref.	Species	Height (m)	Stem diameter (mm)	Branch spread (m)	Crown clearance (m)	Age class	Physiological condition	Structural condition	Comments	Management recommendation	Category grading	Root Protection Area (m ²)	Root Protection Radius (m)
H13	Leyland cypress (Cupressus X leylandii)	5-6 average	Up to 250 average es	1-3 average	0 average	Early mature	Good	Fair	Pruned third party cypress screen.	No action required.	C2	28.3 average	3.0 average
H14	Leyland cypress (Cupressus X leylandii)	4 average	Up to 150 average est	1-2 average	0 average	Early mature	Good	Good	Pruned third party cypress screen.	No action required.	C2	10.2 average	1.8 average
T15	Pedunculate oak (Quercus robur)	13	280	N: 5 E: 1 S: 0 W: 3	Crown: 3 west Branch: 4 west	Early mature	Good	Fair	North lean. Crown reduced over site.	No action required.	B1	35.5	3.4
T16	Beech (Fagus sylvatica)	14	400 est	N: 4 E: 5 S: 4 W: 5	Crown: 4 easy Branch: 4 north	Early mature	Fair	Good	Third party tree viewed from site. Crown lifted over site. Appears to exhibit minor tip dieback.	No action required.	B1	72.4	4.8
T17	Prunus sp.	3	60	N: 0.5 E: 0.5 S: 0.5 W: 1	Crown: 1 average Branch: 5 average	Young	Good	Fair	Small tree at north end of garden. Compacted soil at base.	Fell and remove stump.	C1	1.6	0.7
H18	Mixed (cherry laurel, Leyland cypress, hazel, holly)	2-8 average	Up to 200 average est	1-3 average	0 average	Semi mature-mature	Good	Good	Pruned hedgerow with larger screening trees behind. Good screening benefit.	No action required.	B2	18.1 average	2.4 average

Site: Kiln wood Cottage

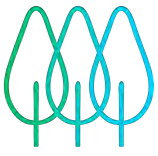
Survey date: 16/11/2023

Surveyor: Peter Davies

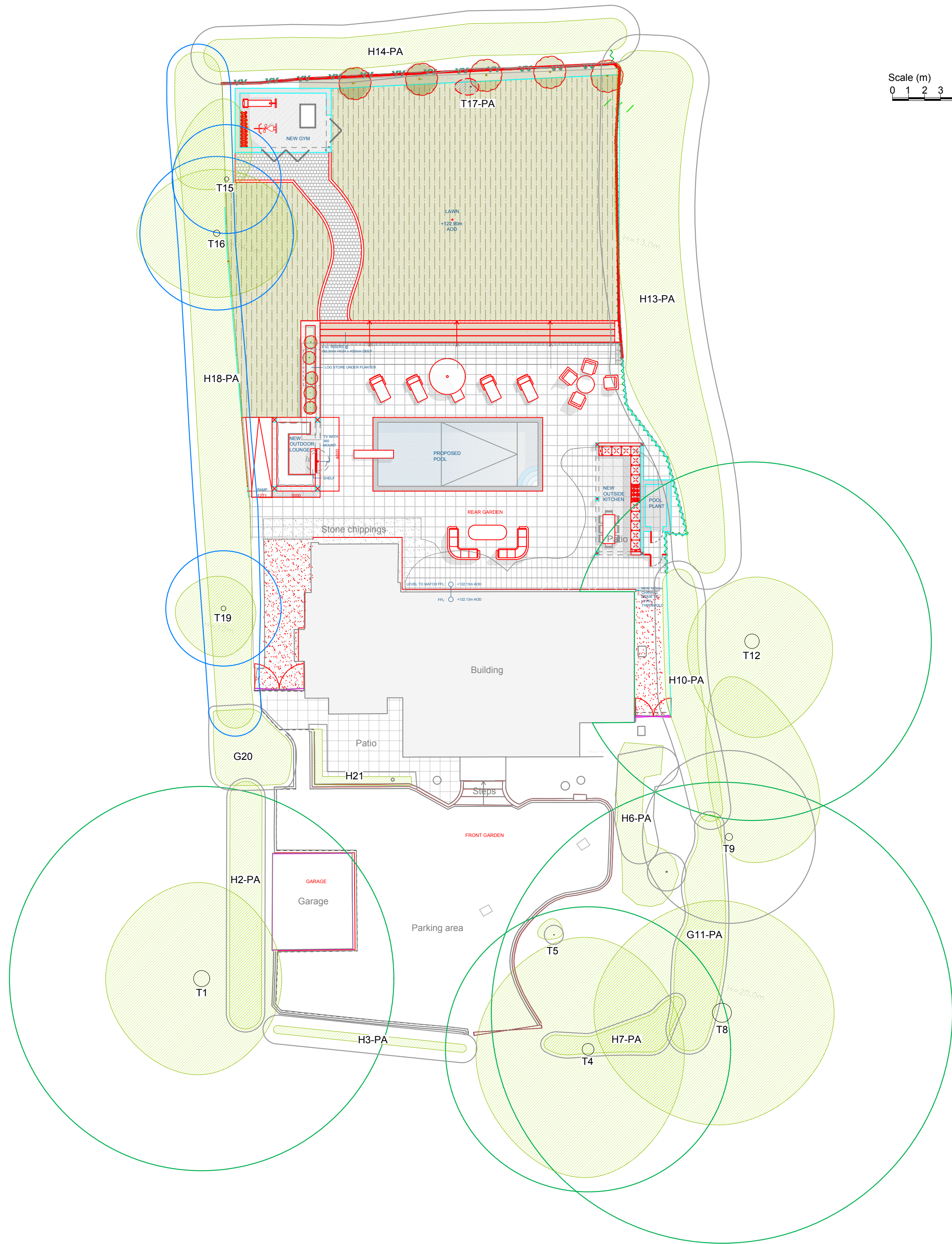
Tree Survey Schedule



Tree ref.	Species	Height (m)	Stem diameter (mm)	Branch spread (m)	Crown clearance (m)	Age class	Physiological condition	Structural condition	Comments	Management recommendation	Category grading	Root Protection Area (m ²)	Root Protection Radius (m)
T19	Norway maple (Acer platanoides)	11	300 est	N: 2 E: 2 S: 3 W: 3	Crown: 6 average Branch: 6 average	Mature	Good	Good	Third party tree viewed from site through high cypress and laurel hedgerow. No major visible defects. All dimension estimated.	No action required.	B1	40.7	3.6
G20	Cherry laurel (Prunus laurocerasus)	4-5 average	Up to 150 average est	1-2 average	0 average	Early mature	Good	Good	Pruned laurel shrubs.	No action required.	C1	10.2 average	1.8 average
H21	Yew (Taxus baccata)	1 average	Under 75 average	0.5 average	0 average	Young	Good	Good	Low decorative hedgerow.	No action required.	C1	2.5 average	0.9 average



Appendix 3: Tree Retention Plan



Scale (m)
0 1 2 3 4 5 6 7 8 9 10 15 20

- Key:**
- Root protection area for category A* tree to be retained
 - Root protection area for category B* tree to be retained
 - Root protection area for category C* tree to be retained
 - Canopy of tree to be retained
 - Canopy of category C* tree to be removed

* Tree categorised in accordance with BS 5837:2012 'Trees in relation to design, demolition and construction - Recommendations'.

Tree survey schedule contains further information for each tree.

This drawing should be viewed in colour.

Tree numbers suffixed with PA indicate the tree position is approximate.

Drawing no: PJC/6477/23/B Rev: 01 Sheet number: 1 of 1

Client and site:
Made Architects

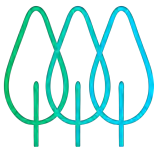
Kilnwood Cottage
Huntsland
Turners Hill Road, RH10 4HB

Drawing title: Tree Retention Plan

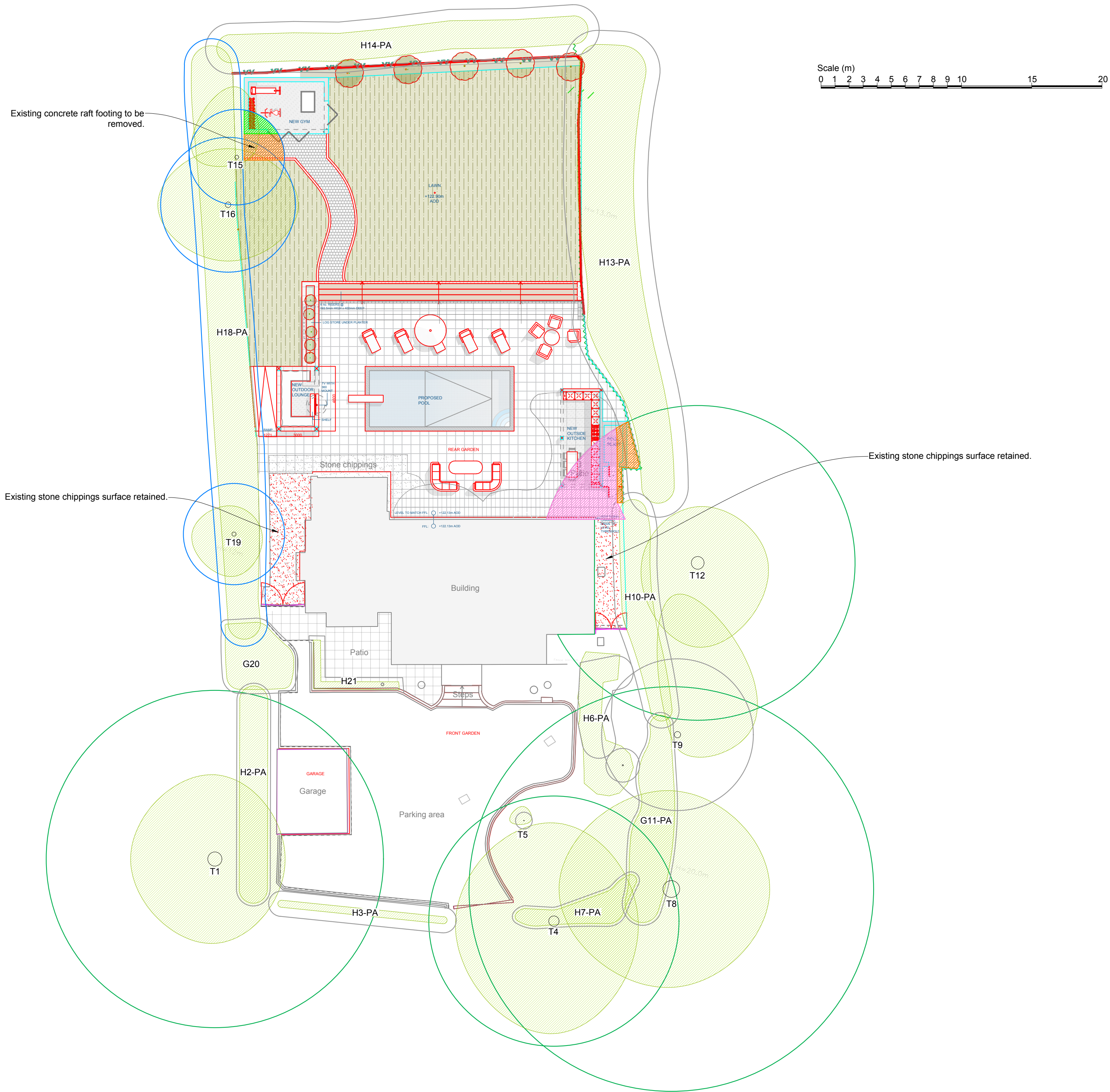
Date drawn: 17/01/2024

Scale: 1:200 at A2

Drawn by: PD Checked by: LW



Appendix 4: Root Protection Area Incursions Plan



- Key:**
- Root protection area for category A* tree to be retained
 - Root protection area for category B* tree to be retained
 - Root protection area for category C* tree to be retained
 - Canopy of tree to be retained
 - New foundation slab within root protection area
 - New hard standing within root protection area
 - Existing hard standing replaced within root protection area

* Tree categorised in accordance with BS 5837:2012 'Trees in relation to design, demolition and construction - Recommendations'.

Tree survey schedule contains further information for each tree.

This drawing should be viewed in colour.

Tree numbers suffixed with PA indicate the tree position is approximate.

Drawing no: PJC/6477/23/C Rev: 01 Sheet number: 1 of 1

Client and site:
Made Architects

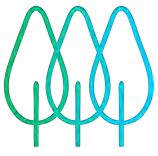
Kilnwood Cottage
Huntsland
Turners Hill Road, RH10 4HB

Drawing title: Root Protection Area Incursions Plan

Date drawn: 17/01/2024

Scale: 1:200 at A2

Drawn by: PD **Checked by:** LW



Appendix 5: Tree Protection Plan

Temporary ground protection to remain until new hard standing is constructed.

New hard standing to be hand excavated.

Access to rear garden along existing hard standing.

New hard standing to be hand excavated.

Temporary ground protection to be installed following removal of existing hard standing and prior to installation of new hard standing.



Key:

- Root protection area for category A* tree to be retained
- Root protection area for category B* tree to be retained
- Root protection area for category C* tree to be retained
- Canopy of tree to be retained
- Tree protection fencing
- Temporary ground protection
- Construction exclusion zone
- Hand excavation within root protection area

* Tree categorised in accordance with BS 5837:2012 'Trees in relation to design, demolition and construction - Recommendations'.

Tree survey schedule contains further information for each tree.

This drawing should be viewed in colour.

Tree numbers suffixed with PA indicate the tree position is approximate.

Drawing no: PJC/6477/23/D Rev: 01 Sheet number: 1 of 1

Client and site:
Made Architects

Kilnwood Cottage
Huntsland
Turners Hill Road, RH10 4HB

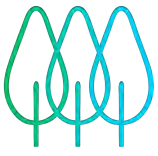
Drawing title: Tree Protection Plan

Date drawn: 17/01/2024

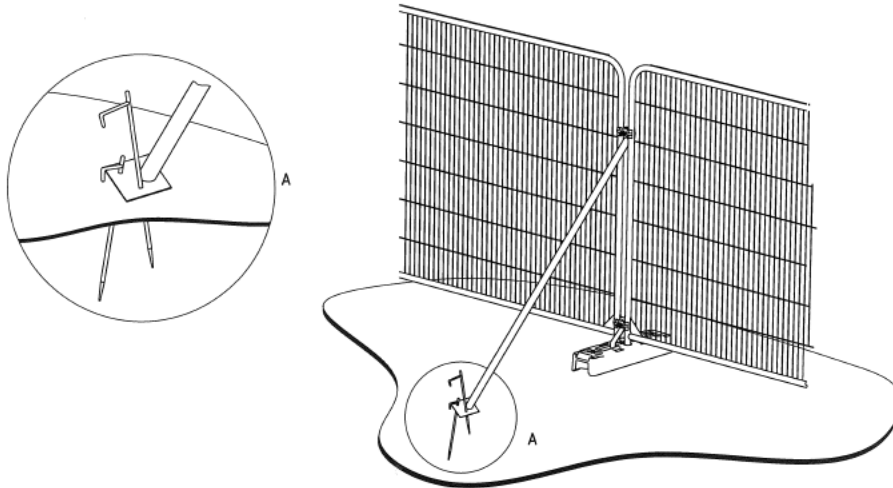
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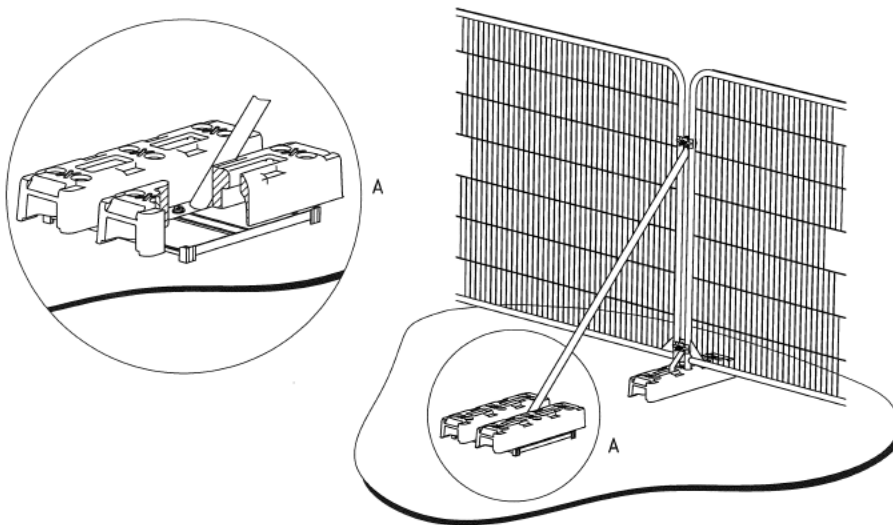
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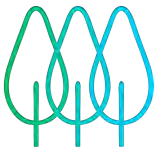
Appendix 6: Tree Protection Fencing Specification



a) Stabilizer strut with base plate secured with ground pins



b) Stabilizer strut mounted on block tray



Appendix 7: Example Protective Fencing Sign





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