Arboricultural and Planning Impact Assessment Report: Recommendation Report:

43 Hillfield Road, Camden, London, NW6 1QD

Report Date: 4th December 2020

Ref: AAS/PEW/AIASR/0412:20

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Arboricultural Report

Location: 43 Hillfield Road, Camden, London, NW6 1QD
Ref: AAS/PEW/AIASR/0412:20
Client: Andy Cserep
Report Date: 4th December 2020 Rev 1: n/a
Date of Inspection: Thursday 19th December 2020
Prepared by: Philip Wood BSc(Hons)LAM.

Please note that abbreviations introduced in [Square brackets] *may be used throughout the report.*

Instructions
Issued by – Gonçalo Carvalho of Extension Architecture on behalf of the Client

TERMS OF REFERENCE – Ashmore Arboricultural Services [AAS] were instructed to survey the subject tree(s) within the grounds of the property, or in neighbouring property close to the proposed development in order to assess their general condition, constraints they may pose to development, the potential impact that the changes on site may have on the tree(s) and identify recommendations (where appropriate) to safeguard or limit the impact on the health of the tree(s), providing a brief planning impact and integration statement for the removal of the existing terrace area and construction of a garden studio. The proposed works are to remove an established decked terrace structure and small shed and replace it with a small garden studio near to some existing trees. Concerns had been raised regarding the condition and longevity of some of the trees and to assess the potential to build the scheme near the trees. The main envelope of the proposed studio is located in the place of the existing footprint of the decking near to some trees of limited amenity value. The garden studio will be constructed by removing the existing decking and railway sleepers and an old existing garden shed and its base, replacing this with the new garden studio. The site has various changes of level between the garden and the garden area beyond, which work in the schemes favour. It is known that the property is not within a Conservation Area, and the trees are not believed to be subject of a tree preservation order [TPO] at this point in time. Therefore, there are no tree related planning restrictions on pruning or removal other than relevant legal ownership factors, which can be undertaken without reference to the Local Planning Authority. The Local Authority give guidance related to development near trees and where there may be some tree related impact, the proposed development should be assessed by an arboricultural consultant to safeguard the long-term health and well-being of the trees on, or adjacent, to the site for the future sustainability of the local area. Also, where trees are affected or require removal by a proposed scheme the impact should be assessed in accordance with the current standard.

Executive Summary

The proposal for the site which needs to be considered in relation to trees is to remove an established decked terrace structure and small shed and replace it with a small garden studio near to some existing trees. Plans reviewed by AAS indicated a couple of options for the decked area at the front of the studio, but the footprint area of the actual studio building remains the same, with the most significant of the trees inspected being the Apple (T7), the scheme to be submitted to the LPA details the soil area remaining the same near the group of Wild Plum trees (T1-T6) and this is the basis of this AIA report. The studio will be positioned to the rear of the garden utilising the benefit of the small retaining wall that has been in position for many years between the two gardens also the contour of the ground level utilising the general slope of the garden to avoid conflict with established tree roots. The studio will be slightly elevated at the front similar to the existing edge of the planter bed where the trees are growing. The existing established retaining wall at the end of the garden is considered likely to have created a deflective barrier to the establishment of some of the tree roots along with past landscaping for the decking and railways sleepers which will avoid the need for extensive additional changes to levels. The studio sits predominantly over the existing decked area and base of the old garden shed. The Wild Plum trees (T1-T6) are in varying condition, some of which are in extensive decline. The trees have very contorted growth habit and a couple have bacterial cankers, lesions and cavities formed over the years and the upper crowns are sparse in their branch structure indicating decline of the specimen. None of the trees inspected are considered to be worthy of the imposition of a tree preservation order and so it is considered that care should be taken to try to retain the healthier trees but any potential negative impact should not be a barrier to approving the new studio. The scheme is not considered likely to have a significantly detrimental impact on the long-term health of the retained neighbours Apple tree (T7) or the broader amenity of the area if all works are carried out with upmost sensitivity.

The proposed scheme doesn't require the removal of any trees, though some poor-quality trees could be removed regardless of the development. The proposed scheme is within the RPA of the Theoretical Root Protection Area of the Apple (T7) but the existing boundary retaining wall, previous decking structure and landscaping are considered to have deflected and created areas where the roots are unlikely to be present in any abundance. The studio predominantly replaces the existing decking and garden shed and this tree could be adequately protected during construction, subject to appropriate safeguards, tree protection measures and appropriate site-specific sensitive working methods for areas near to the Apple (T7).

A site-specific assessment has been made which concludes it would be acceptable to construct the scheme and sufficiently protect the majority of the root systems of the trees. The tree on site should be relatively unaffected by the scheme, if carried out sympathetically with appropriate tree protection measures and this would not result in a negative visual amenity impact, thus not substantially affecting the broader amenity of the area; there should be no material arboriculturally related planning reason to withholding planning consent. This should be subject to an appropriately worded condition being attached to any planning approval (if considered necessary).

Documents Supplied

Supplied prior & subsequent to the site visit:

1.	Studio 3D Render Views	Date: n/a	Dwg No: n/a	Rev -
2.	Existing & Proposed Ground Floor Plan	Date: 04.09.2020	Dwg No: 43HR PL-01	Rev -
3.	Existing & Proposed Roof Plan	Date: 04.09.2020	Dwg No: 43HR PL-01	Rev -

1.0 Scope of Survey

1.1 The survey is concerned with the arboricultural aspects of the site only.

1.2 This report is only meant to identify the trees requested for inspection within the confines of the site, or those of dangerous condition within falling distance of the site if in third party ownership and comment on their health, condition and management.

1.3 The planning status of the trees was not investigated in extensive detail, but the property is not in a Conservation Area. It is recommended that an enquiry would need to be made to the local Council as the Local Planning Authority [LPA] to confirm the tree(s) is (are) subject of a specific Tree Preservation Order before undertaking the recommendations, if uncertainty remains.

1.4 A qualified and trained Horticulturalist and Arboriculturist undertook the site visit and prepared the report. The contents of this report are based on this. Whilst reference may be made to built structures or soils, these are only opinions and confirmation should be obtained from a qualified expert in this specific fields as required.

1.5 Where reference to trees in third party properties, these trees were surveyed from within the subject property, therefore a detailed assessment not possible and some (if not all) measurements were estimated.

1.6 Discussions took place between the Surveyor and no other 3rd party.

1.7 The trees were inspected on the basis of the Visual Tree Assessment method expounded by Mattheck and Breleor (The body language of tree, DoE booklet Research for Amenity Trees No. 4, 1994).

1.8 The survey was undertaken in accord with British Standard 5837: 2012 Trees in relation to design, demolition and construction – recommendations (where applicable or required).

1.9 Pruning works will be required to be in accord with British Standard 3998:2010 (Tree work – Recommendations).

1.10 The client's attention is drawn to the National House Building Council Standards, 2007, chapter 4.2: Building near trees (NHBC) when considering tree replacement species or foundation design details.

1.11 The client's attention is drawn to the responsibilities under the Wildlife and Countryside Act (1981).

2.0 Survey Method

2.1 The survey was conducted from ground level with the aid of binoculars, where required.

2.2 No tissue samples were taken nor was any internal investigation of the subject trees undertaken.

2.3 No soil samples were taken.

2.4 The height of each subject tree was estimated or calculated by use of a clinometer.

2.5 The stem diameters were measured in line with the requirements set out in BS5837:2012 - Trees in relation to design, demolition and construction recommendations.

2.6 The crown spreads were measured with an electronic distometer or retractable tape measure. Where the crown radius was notably different in any direction this has been noted on the Tree Survey Plan (appendix A), or in the tree schedule (appendix B, if applicable).

2.7 The Root Protection Area [RPA] for each tree is included in the tree table, both as a radius of a circle, and as an area. The Theoretical Radial Root Protection Area is illustrated in **Pink** & The Site Specific Assessed Theoretical Root Protection Area is illustrated in **Orange** in appendix A (*Where Applicable*).

2.8 All of the trees that were inspected during the site visit were detailed on the plan at Appendix A. Please note that the attached plan is for indicative purposes only, and that the trees are plotted at approximate positions based on the plan provided by the surveyor. The trees on this plan are categorised and shown in the following format: COLOUR CODING AND RATING OF TREES:
Category A – Trees of high quality with an estimated life expectancy of at least 40yrs. Colour = light green trunk outline on plan.

Category B – Trees of moderate quality with an estimated life expectancy of at least 20yrs. Colour = mid blue trunk outline on plan.

Category C – Trees of low quality with an estimated life expectancy of at least 10yrs. Colour = uncoloured/grey trunk outline on plan

Category U – Those in such a condition that they cannot realistically be retained as living trees in the context of the current land use for longer than 10years. Colour = red trunk outline on plan.

The crowns of those trees that are proposed for removal, or trees where the crown spread is deemed insignificant in relation to the proposed development are not always shown on the appended plan; however, their stem locations may be marked for reference.

All references to tree rating are made in accordance with British Standard 5837:2012 Tree in relation to design, demolition and construction.

2.9 TREE PRUNING / REMOVAL: A list of all tree works that are required is included in the tree schedule at Appendix B. Pruning/removal has only been specified for the following reasons:

- Where the works are required to reduce or limit the future risk posed by the tree(s).
- Where works are required for safety reasons.
- Where work is needed to mitigate a legal responsibility or duty.
- Where work is required to improve tree form, or improve the longer-term health and management of the tree in its current surroundings.
- Where works are considered appropriate to reduce or mitigate the impact of the tree(s) may or may be likely to have on property.
- Where the trees are not required by the client and they are not considered worthy of the imposition of a Tree Preservation Order.

Where any tree work is needed, this work will be in accordance with British Standard 3998: 2010 (Tree Work – Recommendations).

Wild Plums (T1-T6) and Apple (T7) Neighbours Garden

3.0 Arboricultural Impact Assessment/Appraisal

3.1 The subject property is located on the north-western side of Hillfield Road in the London Borough of Camden, North London. However, the primary trees of interest are located within the rear garden area towards the rear of the site. There is large shrub/tree located towards the mid-area of the rear garden however this is remote from the area subject of the planning application and is not relevant to be surveyed as part of this AIA assessment. The property is not believed to be located within a Conservation Area and trees are not believed to be subject to a TPO. The garden has a fairly open feel with limited paved areas and some existing landscape structures located near to the trees. The existing decking and garden shed have been in place for many years and the new garden studio is designed to replace the existing structures making then more useable and accessible.

3.2 **Tree Condition Assessment**:
Having inspected the trees: The Apple (T7) is the largest of the trees inspected and it is a well-established mature specimen though of no significant broader amenity to the local area, the crown of the tree is of moderate height and the tree has been pruned in the past and there will be very limited additional crown to structure issue. The Wild Plum trees (T1-T6) are much smaller specimens, of no major significance to the local area given especially given the declining condition and limited life expectancy of a few of the specimens. One of the specimens (T6) has direct trunk related conflict issues with the boundary fence, as well as structural and health defects to a couple of the trees which would need to be considered in due course regardless of the proposed development.

- The Apple (T7) is located in the neighbour's garden in an area of soil at a higher level than the application site. A retaining wall had been put in position to retain the soil behind it at a higher level, where the tree is located. The specimen has a natural growth lean towards the site that would have formed decades ago which makes the tree initially appear closer to the boundary than it actually is. The tree is of moderate form and based on the growth form of the tree it is considered likely that the trees root development profile and especially structural root development would be located on the side of the tree furthest from the proposed studio. The moderate size of the root protection area will have been deflected to some degree by the presence of the retaining wall and the confines of the existing garden features and levels. The Apple has been pruned in the past to reduce the overall crown spread of the specimen over the site and lift low branches and so the resultant crown is smaller than that previously experienced by the tree. There was no obvious staining or resin bleeding apparent at the time of inspection when assessed from the restricted view. The height of the crown would only require some minor crown lifting so there is no significant conflict with the proposed garden building.

- No significant pruning of the tree is required to the proposed development works identified in the planning application.

- The Wild Plums (T1-T6) are located in a small raised planter adjacent to the boundary created by some rocks and the boundary fence. The higher surface level of planter complements the design of the decking design at the front of the studio. The trees are of limited amenity value and some are in decline which is evident by their sparse crowns, which have collectively competed as a group. There is some extensive cankering and exudate that are present on the trunks of a couple of the trees, and the crowns of the trees have formed with extensively unbalanced crowns. Tree T6 has been rubbing significantly against the boundary fence and has stripped the bark from the tree. The current retention of the tree is unviable in the long term, regardless of the development. The resinous lesions affect the transportation of nutrients around the trees and this can be seen by the small size of the leaf supporting twigs compared with the other healthier specimens.

- Heavy/major crown reduction pruning could aid the retention of the trees but the trees would lose most, if not all, of their remaining amenity. In addition, T6 is in direct conflict with the fence and is causing clear physical damage to the boundary fence and to the tree.

- The trees are looking stressed due to the commonly found impact of bacterial cankers and resign bleeding inherent with this species of tree as well as group competition with each other. Therefore, selective removal and light pruning should benefit the group in the longer term.

The relevant details of the tree inspected have been included within the appended schedule.

3.3 At the point of inspection, the trees had no obvious fungal fruiting bodies visible from the ground inspection, which would normally help to identify trees of imminent hazard, which are factors that identify specific limits to a tree's appropriate retention in high foot fall areas or small contained garden situations. The Wild Plums (T2, T3 & T6) however do have areas of bacterial canker wounds on the main trunks, reducing nutrient flow around the tree which can be seen in the leaf holding twig structure in the upper crown and the sparse nature of the upper crown. Some of the trees are in decline and none are considered worthy of the imposition of a tree preservation order.

Regular inspections of the retained tree(s) by a suitably trained or experienced arboriculturalist should be carried out. Subsequent remedial works will ensure that trees are maintained in a suitable manner to exist in harmony with the new structures and its occupants for many years to come.

3.4 **The Proposal**:

The main emphasis of this assessment has been to consider the potential impact of the proposal and provide recommendations for safeguards to protect the trees during the development proposal while enhancing the growing condition of the trees in the longer term. The proposal for this area of the site which needs to be considered in relation to the trees is to remove the existing decking and garden shed structure and constructing a studio. Plans reviewed by AAS indicated a couple of options for the decked area at the front of the studio, but the footprint area of the actual studio building remain the same with the most significant of the trees inspected being the Apple (T7), the scheme to be submitted to the LPA is that with the soil area remaining the same near the group of Wild Plum trees (T1-T6) and this is the basis of this AIA report. This scheme is to be submitted to the LPA and this is the basis of this AIA report.

The studio will be slightly elevated at the front similar to the existing edge of the planter bed where the trees are growing. The existing established retaining wall at the end of the garden is considered likely to have created a deflective barrier to the establishment of some of the tree roots along with past landscaping for the decking and railways sleepers which will avoid the need for extensive additional changes to levels. The studio sits predominantly over the existing decked area and base of the old garden shed.

All new pathways and soft landscaping areas within the Root Protection Areas (RPAs) of the retained trees should be designed using no-dig, up and over construction and in close co-ordination with the retained arboriculturalist using porous materials (where appropriate or practical as to be indicated in the final landscape detailing). Where hard surfaces or foundations are to be emplaced or removed within the RPAs; site specific method statement(s) should be produced with direct input from the retained arboriculturalist and appropriately monitored with onsite supervision of the arboriculturalist for tree/tree root sensitive stages, where required or conditioned.

3.5 **Site Levels:**

The scheme will be implemented by carefully raising the floor area of the studio so that it enables a ventilation gap to be achieved under studio. The existing decking and shed will be removed along with other landscape features such as railway sleepers to aid the creation of a void space. The structure is a lightweight system and is to be constructed above the existing ground level and does not require any lowering of the ground levels below that of the base of the decking, this conforms with advice following the principles used on other garden studio projects within Camden. As it is not proposed to lower the site levels significantly, just to even out minor variations of the soil level and the likelihood of the deflected root system and dominance of the RPA of the Apple tree (T7) outside of the garden. Replacing existing landscaping and decking is not considered likely to have a major change to the potential evapotranspiration and gaseous exchange potential of the Root Protection Zone (RPZ) as this is considered to be predominantly in the neighbouring garden.

From assessment of the site it is understood that the scheme does not require any notable change of gradient or soil removal outside of the site in the adjoining garden. This works in favour of the proposed scheme which shows the existing level will be relatively unchanged within the site. No level changes should occur within the root protection zone of any of the retained tree(s), unless otherwise discussed with AAS and subsequently approved the LPA as assessed as part of this report.

3.6 **Foundation Solution**:

The existing decking and garden shed shall be removed along with any garden landscape features and this will be replaced with the garden studio. Only discrete minor foundations are proposed for the garden studio and this will not require excessive excavation or dig down, but the proposed structure is a low ceiling height studio and therefore will be able to achieve the required headroom without the need to carryout major pruning of the adjacent trees, any pruning would be minor.

The foundation solution being proposed is considered to be the most obvious way forward for the foundations of this style of building and we have had significant success on similar projects and consider this would be acceptable here, subject to the final design and specification. The solution for garden studios bridges between foundation piles/pads positioned around the perimeter of the building and with some central piles/pads to eliminate the spring from the base/floor. However, as the proposal is predominantly located outside of the area of the RPAs of the trees maintaining as much soil structure as possible benefits the chance of any future root development to benefit from the presence of retaining the soil volume as much as possible. As this type of approach is specified and shall be implemented sensitively this reduces further the impact of the proposal and alleviates some of the minor negative conflict that could be formed by the presence of large volumes of concrete foundations on the general drainage pattern of the area.

3.7 **Crown to Building Relationship:**

The existing height of the crown of the Wild Plum (T1-T6) are such that the proposed structure would not require any additional pruning of the tree to achieve the proposal. The Apple (T7) would require relatively minor crown lifting and cutting back, but this is commensurate with previous pruning work and is considered acceptable and not a suitable arboricultural reason to refuse planning consent on tree impact related grounds.

3.8 **Retention of Site Porosity and Moisture Distribution:**

There are often a number of elements of concern on such a site regarding the affect that the loss of captured precipitation from the roof structure would have. Given the slightly elevated nature of the structure and a proposed redirection of the surface water run-off from the Green Roof of the building, we

consider there will be little loss of porosity and gaseous exchange, especially given the existing features already on site. Our recommendation is for the rainfall from the roof to be redirected down to the soil below using perforated drainage pipe. The down pipes will be managed as part of the vertical fenestration/articulation of the building design, this means that the moisture and rainfall from the roof would not be more than a couple of metres from where it would have fallen prior to the decking and shed removal and therefore we consider the impact of the new structure would be negligible if implemented with care and not a reason to refuse the scheme.

This combined with careful discharge below, will maintain the relative status quo for the soil's moisture and trees nearby.

3.9 **Proximity of New Building and Paving:**

The proposed new studio extension is sited predominantly over the footprint of the existing decking and garden shed and therefore the change of developed area is marginal. Some safeguards will be required to protect the trees for period of construction works in, or near to the RPAs. If this scheme is approved and precautions are taken, or conditioned, as part of the final planning process it is our view that it is possible to achieve the studio without undue impact if implemented with sensitivity. The proposed new area of decking respects the existing flower bed in front of the studio and it will be retained while the new decking is installed at a slightly raised level avoiding the need for excessive excavation. Ground protection boards will be put in position to protect any open soil areas while the demolition and construction work is carried out to avoid compaction of the soil, this is especially important during periods of wet weather when the soil structure is more vulnerable.

3.10 **Services Routes and Drainage Connection:**

It is understood that the main services route will be for an electrical power supply and this is to be located along the north eastern side of the garden furthest from the established tree. There is no foul water drainage proposed for the studio. Should there be a reason to install drainage connection then this must be located along the north eastern side of the garden and must be outside the RPA of any trees. As a design principle all connections will be to the existing services but any new services must be introduced into the building on the furthest side of the building at the eastern corner.

The exact specification must be checked with the relevant expert, but the above principles or similar must be followed, if this differs significantly this must be checked with the arboricultural consultant employed by the client or the LPA tree officer. They must not be excavated into the soil profile below the level of any undisturbed soil on site unless approved by the arboricultural consultant or the LPA tree officer. Any proposed services and connection route should be indicated on the final plans.

3.11 **Assessment of Retained Tree's Root Protection Area:**
Section 4.6.3 of BS 5837: 2012 states that the Root Protection Area (RPA) of each tree should be assessed by an Arboriculturalist considering the likely morphology and disposition of the roots, when known to be influenced by past or existing site conditions.

Further to AAS's site visit, it has been advised that the Wild Plum tree (T1-T6) and Apple (T7), should not be considered as a material constraint to the development in arboricultural terms, if works are undertaken with due care and subject to the above ground nature of the studio and the construction detail is in accordance with that assessed. Therefore, in arboricultural terms, and subject to appropriate tree protection measures, where required, the scheme is considered acceptable as it would not have a significant negative impact on the specimens proposed for retention on the site. Currently, the only significant structure proposed within the theoretical RPA of the tree proposed for retention is the studio extension predominantly located over the position of the decking and garden shed. There will be an incursion into the theoretical radial RPA of the Apple (T7) but not to its site-specific Theoretical adjusted RPA as part of the construction working area which is already protected to some degree by the existing landscape features and should not have any significant negative effect on the retained trees. Appendix A shows the Theoretical Radial RPAs (in **Pink**) (where applicable) of the retained tree and the site-specific Theoretical RPA is illustrated in **Orange** (where applicable).

3.12 **Tree Protection Measures**:
Section 4.6.3 of BS 5837: 2012 states that the Root Protection Area (RPA) of each tree should be assessed by an Arboriculturalist considering the likely morphology and disposition of the roots, when known to be influenced by past or existing site conditions.

It can be seen from the plan in Appendix A that some tree protection measures will need to be provided to the retained Wild Plum tree (T1-T6) and Apple (T7). The existing boundary fence and retaining wall at the rear of the site should be retained and will help protect the Apple (T7) from compaction, but the Wild Plum trees will require some additional temporary protective fencing or hoarding just to avoid damage to the tree's trunk and soil in the raised flower bed planter. If implemented with appropriate care, this should not be sufficiently detrimental to withhold planning approval. In addition, some tree root ground protection measures to avoid any damage or compaction of the soil below the existing surfacing. If implemented with appropriate care, this should not be sufficiently detrimental to withhold planning approval.

Tree Protection Fencing:
The tree protection fencing (where required) will be erected prior to any commencement of works on site and where any soft stripping or internal works of the building is required in the close proximity of tree and removed only when all development activity is complete or unless agreed as part of a conditioned Arboricultural Method statement for the landscaping works. The protective fencing will be as that shown in BS5837 (See Appendix C)

The fence must be marked with a clear sign reading (or similar):

"TREE PROTECTION FENCING
Construction Exclusion Zone – No Access, Do Not Move".

DISMANTLING PROTECTIVE BARRIERS: Protective barriers must only be completely removed when all machinery, and equipment has left site. A minimum of seven days notice should be given to the local planning authority prior to dismantling works begin.

Examples of Tree Protection from similar sites:

Tree Root Ground Protection:

Some of the proposed works will require access close to the RPAs/RPZs of retained tree and areas that would otherwise be protected with Tree Protection Fencing/Barriers. This is especially applicable for the garden studio decking construction work. A percentage of the works, access for materials and/or preparation working area will be in the RPA so some form of significant tree root ground protection will still be required in select discrete areas. Though the studio construction is relatively simple, its proximity and the need for some circulation/working space will open the potential for some conflict to occur while demolishing any existing structure, and for construction to take place, inevitably some ground protection will be required to protect the RPA/RPZs of the tree. But, should there be any reason to disturb, excavate, remove or alter the location of the structures noted in Appendix A, the retained Arboricultural Consultants or the LPA's arboricultural officer must be contacted prior to any works be planned or implemented.

The Plan Dwg No: WCEL/PEW/TSP1&TPP1/REV1 in Appendix A, identifies recommendations for tree root ground protection locations shown in Light Blue. These protection works are considered acceptable, but if the contractor considers them to be insufficient to protect the ground from compaction from the level and extent of activity or machinery, they are obliged to identify this to the project architect for review with the arboricultural consultant.

The ground protection is proposed from the start of preparation work until completion. On this site the work within or close to the RPZ of the retained tree: GP1 ground protection is considered sufficient and the locations requiring ground protection have been proposed on the plan.

Ground Protection GP1 - Ground Protection, temporary, light weight works/storage (Pedestrian Traffic, Light weight dumpers, mini diggers etc). The paved surface and open ground areas shown on the Tree Protection Plan in Appendix A will be over layered with a double layer of 12mm shuttering Ply, exterior grade weatherboard ply or OSB 3 to provide enhanced ground protection. This shall be a double layer laid with staggered joints with minimum overlap of 400mm, screwed or robustly fixed together to provide an even homogenous surface (subject to ongoing inspections by the site manger considers the need on safety grounds) where it is considered that the area may become slippery or a hazard, when wet, the upper surface can be replaced with a suitable anti-slip coated mesh style phenolic resin plywood sheet or similar and/or where it is considered insufficient for its purpose the ground protection will revert to the alternative concrete slab option, see following text.

The **Ground Protection to be spray marked** with a clear sign reading (or similar):

"RPZ – NO DIG"

"Ground Protection- NO DIG"

"Construction Exclusion Zone –
No Excavations, No Mixing, No Chemicals"

Examples of Ground Protection:	
	
	

Where protection has been put in place within RPAs of retained trees on or adjoining the site (including retained hard surfaces as ground protection) these will become the Root Protection Zones [RPZs]. This ground protection/tree protection must still be treated as sensitive site zones. There can only be storage of clean lightweight materials, non-corrosive or hazardous liquids must still be kept away from the area(s) this includes corrosive powdered products, such as, cement, lime and plaster. Storage of cement, hydro-lime, plaster or similar powdered products is **not** acceptable.

Mixing of these materials is also unacceptable within the RPAs of retained trees. Caution must also be given to not storing any liquids, powdered products or materials on any surface with a gradient or fall that runs into the RPA of a retained tree or landscape area, as extreme weather conditions or spillages could result in contamination entering the RPZ. But, should there be any reason to disturb, excavate, remove or alter the ground protection or retained hard surfacing other than that agreed, or to alter the proposed hard landscaped area within the RPAs beyond that approved as part of the planning permission AAS's arboricultural consultant must be contacted prior to any works being planned or implemented.

3.13 Reference should be made to the tree survey schedule in Appendix B for details of tree(s) on an individual basis.

3.14 Reference should be made to the indicative sketch plan of the tree protection fencing/barrier in accordance with BS5837 in Appendix C.

4.0 Conclusion:

4.1 This assessment is based on the information provided to date and may not cover all of the points that could be brought up by the LPA, however, having viewed the plans to date for the proposed scheme, based on the points reviewed and recommendations detailed below, we consider the scheme could be achieved with minimal disturbance or significant impact to the Wild Plum trees (T1-T6) and Apple tree (T7) which are to be retained and protected during the development process if planning approval is given.

4.2 There are only a couple of poor quality/diseased tree proposed for removal, which are stressed and in decline, but are not essential for the implementation if the scheme and as such there should be no reason to warrant refusal of the scheme on detrimental tree impact grounds.

4.3 The raised nature of the garden studio with redirection of the green roof rainwater runoff re-directed and the ventilation void retains relative moisture supply, permeability and gaseous exchange. This reduces the negative impact of the proposed studio extension.

4.4 The rear boundary retaining wall will is considered a valuable item in the deflection of the roots of the Apple (T7)and should for any reason this require removal and replacing within the RPZ of the Apple (T7) only the physical section of the brick work can be removed, replaced or rebuilt in a like for like location as the existing old boundary wall foundation unless otherwise agreed, though this is not proposed as part of this application. Subject to appropriate tree protection, where required, this should just be noted for future reference and should not be considered as a material reason to refuse planning consent for the proposed scheme.

4.5 The removal, or breaking up, of the existing decking and garden shed base will require sensitive working practices. It must be made clear within any contract documents that there will be no additional excavation beyond that proposed for the studio's foundations and decking support pads within the RPA/RPZ of retained trees. Subject to appropriate precautionary measures and appropriately specified construction detail (including building materials) these works should be acceptable and not be considered as a material reason to refuse planning consent for the proposed scheme, subject to appropriate conditions being attached to any approval.

4.6 Use of as ground protection measures is a reasonable way of maintaining root protection for the retained tree for as long as possible, while maximising the available working room on site subject to the approval of this report by the LPA.

4.7 Subject to precautionary measures as detailed above including tree protection fencing and retention of the existing rear boundary retaining wall and fence, as tree root protection for the Apple tree (T7), the proposal will not be excessively injurious to the tree being retained, to warrant tree related refusal.

4.8 There will be no appreciable post development pressure, and certainly none that would oblige the council to give consent to inappropriate tree works post development.

4.9 Site supervision is not detailed outlined in this report (and not considered absolutely necessary for this current application scheme due to the relatively light weight nature of construction and limited tree related conflict). If the LPA approve the scheme subject to requiring site supervision, more detail could be provided as part of a release of condition, detailing timing and scheduling.

4.10 Should the client obtain planning approval, subject to conditions, we would be able to assist with further ongoing advice and monitoring, where required, subject to a separate fee proposal.

5.0 Recommendations:

5.1 It is advised where AAS have recommended key important design features these have been observed within the most recent proposed plans which AAS consider to be implementable, subject to normal planning restrictions. Key items highlighted and discussed should follow through to the construction level detail, these should continue to be on the plans and cross-sections as part of the planning or building control process (where applicable) and highlighted to enable the specialist tree or landscape officer to see that the scheme has complied with AAS's recommendations or guidance.

The Planning approval should not be withheld and site works should progress as follows to ensure the healthy retention of the trees:

a. Tree works, in accordance with BS3998 (where required).
b. Installation of all tree protection measures (where required).
c. Construction.
d. Hard & Soft landscaping

5.2 Site supervision – If directed by the LPA within their detailed planning condition requiring arboricultural supervision. An individual e.g. the Site Agent or AAS's retained arboricultural consultant, must be nominated to be responsible for all arboricultural matters on site. This person must:

a. Be present on the site throughout the project or at agreed times in any conditioned Arboricultural Method Statement (where applicable).
b. Be aware of the arboricultural responsibilities.
c. Have the authority to stop any work that is, or has the potential to cause harm to any tree.
d. Be responsible for ensuring that all site personnel are aware of their responsibilities towards trees on site and the consequences of the failure to observe those responsibilities.
e. Make immediate contact with the local authority and / or retained Arboriculturalist in the event of any related tree problems occurring whether actual or potential.

5.3 It is recommended, that to ensure a commitment from all parties to the healthy retention of the trees, that details are passed by the architect or agent to any contractors and sub-contractors working on site, so that the practical aspects of the above precautions are included in their method statements, and financial provision made for these.

5.4 As these elements of detail assessed can be achieved with the appropriate safeguards conditioned, AAS consider that the planning approval should not be unnecessarily withheld, subject to any other planning constraints being addressed.

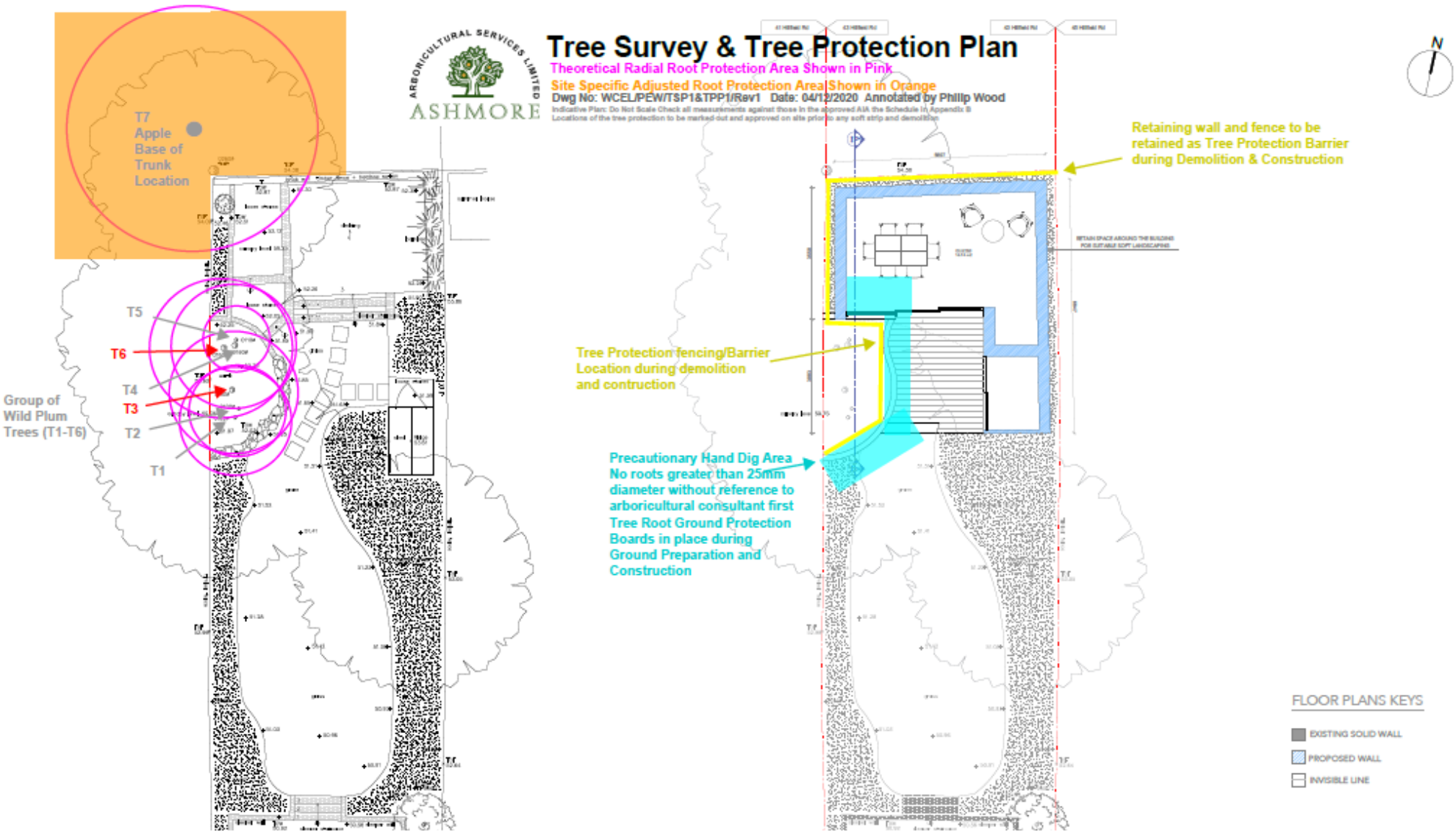
Report Date: 4th December 2020 Rev 1: n/a

Mr Philip E Wood *BSc(Hons) LAM*
Principal Consultant for and on behalf of
Ashmore Arboricultural Services Limited

Appendix A

Tree Survey & Tree Protection Plan (refer to pdf file):

43 Hillfield Rd TSP1 TPP1 Plan Dec 2020



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e-mail: info@ashmoretrees.co.uk

Appendix B

Tree Schedule

Tree No.	Tree species	Height (m)	Multi-stem? (Enter MS)	Trunk / stem count dia. (mm)	Radius of RPA if circle	RPA -Root Protection Area sq.m.	Branch spread				Height of first significant branch (m)	Height of Crown Clearance (m)	Age class	Comments / Recommendations	Estimated remaining contribution	Assessed BS 5837: 2012 Value category
							N	E	S	W						
T1	Wild Plum	6.0		130	1.56	7.65	2.0	4.0	2.0	0.0	2.5	2.5	SM	Small inconsequential specimen of no significance, growth lean to west, lower branches have previously been removed. Recommendations: NWR for Development Reduce back lateral spread of crown on west side by 2m to balance crown.	10-20	C
T2	Wild Plum	5.0		110	1.32	5.49	2.0	4.0	2.0	0.0	3.0	2.5	YM	Small inconsequential specimen of no significance, growth lean to west, lower branches have previously been removed. Specimen in decline with resin bleeding. Recommendations: NWR for Development Reduce back lateral spread of crown on west side by 2m to balance crown	10-20	C
T3	Wild Plum	7.0		150	1.80	10.21	1.5	4.0	1.5	0.0	4.0	4.0	SM	Small inconsequential specimen of no significance, growth lean to west, lower branches have previously been removed. Specimen in decline with crown dieback. Recommendations: NWR for Development Specimen could be removed regardless.	<10	U
T4	Wild Plum	8.0		150	1.80	1.21	1.0	2.0	4.0	3.0	4.0	4.0	SM	Small inconsequential specimen of no significance, lower branches have previously been removed. Specimen in decline with signs of stress. Recommendations: NWR for Development.	10-20	C

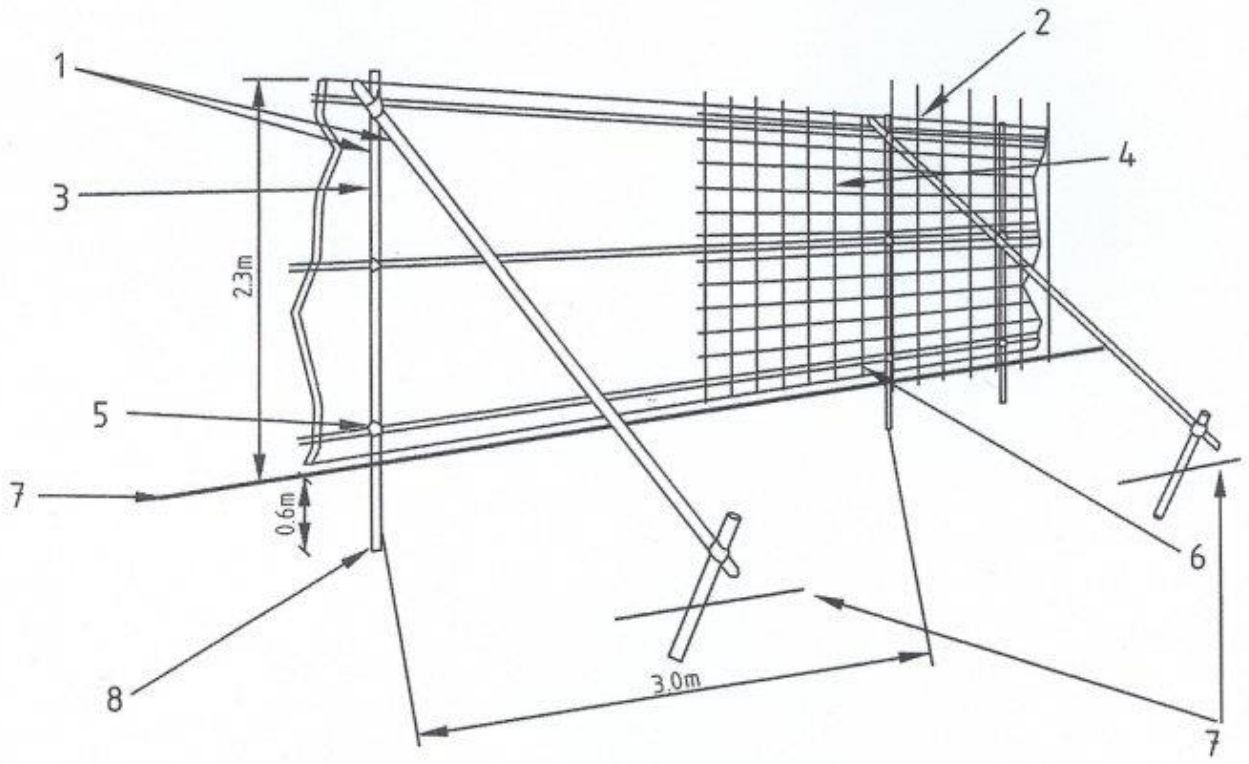
Tree No.	Tree species	Height (m)	Multi-stem? (Enter MS)	Trunk / stem count dia. (mm)	Radius of RPA if circle	RPA -Root Protection Area sq.m.	Branch spread				Height of first significant branch (m)	Height of Crown Clearance (m)	Age class	Comments / Recommendations	Estimated remaining contribution	Assessed BS 5837: 2012 Value category
							N	E	S	W						
T5	Wild Plum	6.0		80	0.96	2.91	1.0	2.0	2.0	2.0	2.5	2.5	SM	Relatively small specimen of no significance. Recommendations: NWR to facilitate development.	10-20	C
T6	Wild Plum	6.0		170	2.04	13.12	1.0	2.0	4.0	3.0	3.5	4.0	SM	Resign excaudate on trunk, tree has lean to the west and has been rubbing on the fence. Recommendations: NWR for Development specimen could be removed regardless of development as H&S precaution.	<10	U
T7	Apple (NT)	8.0		310	3.72	43.61	4.0				3.0	2.5	M	Previously reduced domestic apple, significant growth lean to the west which has re-formed and formed mature crown, trunk located approximately 1.8m from boundery. Recommendations: Minor cut back and lift of canopy to facilitate development. Recommend to neighbour that the tree is re-reduced as part of cyclic maintenance prune.	10-20	C

KEY: Tree No: Tree number (T= individual tree, G= group of trees, W= woodland); Crown = the leaf bearing part of the tree; Tree Species: Sp.= sub species or cultivar of main species; NT = Neighbours Tree (Tree on adjoining land); GL = Ground Level; AGL = Above Ground Level; DWS = Deadwood and Stubs; Diameter: MS = Multi-stemmed; N/S = Not Surveyed (unable to inspect/restricted visibility or access);
Age class: Young (Y), Young Mature (Y/M), Middle Aged (MA) Semi Mature (S/M), Mature (M), Over mature (O/M), Veteran (V); Height (Ht): Measured in metres +/- 1
SULE: Estimated Safe Useful Life Expectancy, Tree can live longer than this value, but can pose a risk to persons or property; Condition: G – Good, M – Moderate, F – Fair, P – Poor, D - Dead

Appendix C

BS 5837: 2012

Tree Protection Barrier/Fencing



1 Standard scaffold poles
2 Uprights to be driven into the ground
3 Panels secured to uprights with wire ties and, where necessary, standard scaffold clamps
4 Weldmesh wired to the uprights and horizontals
5 Standard clamps
6 Wire twisted and secured on inside face of fencing to avoid easy dismantling
7 Ground level
8 Approx. 0.6m driven into the ground

Figure 2. – Protective fencing for RPA

End of Report