



Wood Consulting

Caring for your environment & property

Environmental Limited

Horticultural, Arboricultural, Landscape Consultant & Contractors



Arboricultural Impact Integration Assessment Report:

**West Hampstead Lawn Tennis Club, off Croft Way,
Ferncroft Ave, London NW3 7PQ**

Report Date: 16th November 2024

Ref: WCEL/PEW/AIAR/1116:24



This document is the intellectual property rights of WCEL, its directors and shareholders unless expressly noted in writing to the contrary. This document (electronic or paper form) cannot be reviewed, used, tendered, copied or passed on until payment has been received by the WCEL. Should details not be provided in sufficient time or where an invoice is not paid in full for works completed, the report remains the property of WCEL and cannot be used, passed on or submitted to other parties, or used as part of a pre-app, planning application or tendering process verbal or in writing until full and final payment has been received for this work or any subsequent work leading from its preparation. Acceptance of WCEL's fee proposal was express acceptance of these conditions.

4 Leasway, Grays, Essex, RM16 2HD

T: 01375 387064 M: 07525 615634

E-mail: philip.wcel@outlook.com or pwwcel@outlook.com

Wood Consulting Environmental Limited



Caring for your environment & property



CONTENTS

Section	Subject	Page
Preliminaries	Instructions	1
Preliminaries	Executive Summary	2
Preliminaries	Documents Supplied	3
1.0	Scope of Survey	3
2.0	Survey Method	4
3.0	Arboricultural Impact Assessment/Appraisal & Protection Strategy	6
4.0	Conclusion	15
5.0	Recommendations	16
Appendix A	Tree Survey Constraints & Tree Protection Plan	17
Appendix B	Tree Survey Schedule	19
Appendix C	BS5837 Tree Protection Barrier	22



Silver Birch (T1) Right- In Neighbouring Garden Notable Distance from Clubhouse – No RPA Conflict



Arboricultural Report

Location: West Hampstead Lawn Tennis Club, off Croft Way,
Ferncroft Ave, London NW3 7PQ
Ref: WCEL/PEW/AIAR/1116:24
Client Representative: Sultan Gangji
Report Date: 16th November 2024 Rev 1: n/a
Date of Inspection: Monday 28th October 2024
Prepared by: Philip Wood BSc (Hons) LAM.

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

Instructions

Issued by – Sultan Gangji on behalf of West Hampstead Ltd.

TERMS OF REFERENCE – Wood Consulting Environmental Limited [WCEL] were instructed to survey the subject tree(s) within close proximity to the area of the clubhouse and the 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 an assessment of the rear extension. The proposed works are to remove the existing clubhouse and replace it with a new engineered panel construction club house. This is to replace the existing structure within the same footprint while improving the quality of the structure; its energy efficiency and internal configuration. The site is a large, but the area of proposed works is very discrete and is within the footprint of the existing building. There are only a few trees on site but these are well away from the clubhouse structure location. There are a number of trees in the adjoining rear gardens which are also at a reasonable distance away, located behind a substantial historic boundary wall. WCEL are also to assess appropriate safeguards to limit impact to these trees from the changes proposed on site where relevant.

The existing clubhouse is to be removed, and then replaced with the new lightweight structure within the existing clubhouse footprint, which has the same finished floor level as the current clubhouse. The main trees of interest are all located at a moderate distance from the proposed extension. It is known that the site is located within a conservation area, therefore, there are planning restrictions on pruning or removal, of the trees including both branches and roots of the tree(s) 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 by a proposed scheme the impact should be assessed in accordance with the current standard.

The writer retains the copyright of this report and its content is for the sole use of the client(s) named above. Copying of this document may only be undertaken in connection with the above instruction. Reproduction of the whole, or any part of the document without written consent from Wood Consulting Environmental Limited, is forbidden. Tree work contractors, for the purpose of tendering only, may reproduce the Schedule for tree works included in the appendices.

This document is the intellectual property rights of WCEL, its directors and shareholders unless expressly noted in writing to the contrary. This document (electronic or paper form) cannot be reviewed, used, tendered, copied or passed on until payment has been received by the WCEL. Should details not be provided in sufficient time or where an invoice is not paid in full for works completed, the report remains the property of WCEL and cannot be used, passed on or submitted to other parties, or used as part of a pre-app, planning application or tendering process verbal or in writing until full and final payment has been received for this work or any subsequent work leading from its preparation. Acceptance of WCEL's fee proposal was express acceptance of these conditions.





Executive Summary

The proposal is to remove the existing clubhouse and replace it with a new engineered panel construction club house. This is to replace the existing structure within the same footprint while improving the quality of the structure; its energy efficiency and internal configuration.

The main envelope of the existing clubhouse is to be removed, and then replaced with the new lightweight structure within the existing clubhouse footprint, which has the same finished floor level as the current clubhouse. The main trees of interest are all located at a moderate distance from the proposed extension.

Given the presence of established structures and the reasonable distance that the trees are from the replacement clubhouse, it is our opinion that no root activity from the neighbour's trees at the rear will be present in the area of the proposed replacement clubhouse. Therefore, based on the theoretical radial root protection area, the foundations of the new clubhouse would have no incursion into the root protection areas. However, safeguards have been identified in the recommendations for tree protection fencing/barriers where it is felt it is needed to avoid construction sprawl, where materials and equipment end up being stored in the root protection areas of the trees as well as to protect roots from the passage of construction traffic and operatives, or damaging the trunks of trees.

It is known that the site falls within a conservation area covering the larger trees on and adjacent to the site. Therefore, there are planning restrictions on pruning or removal, of the trees including both branches and roots of the tree(s) without reference to the Local Planning Authority. When viewed on Google satellite imagery the trees appear to be more densely canopy covered, however, most of the trees are less significant than they first appear from above. The main trees of interest are all located at a reasonable distance from clubhouse. Based on the submitted design, the new extension would make no change to the 'structures to tree relationship' already seen on site. Guidance is included in this report in relation to precautionary working practices that should be implemented to reduce the likelihood of the scheme's implementation having any significantly detrimental impact on the long-term health of the trees on and adjacent to the site including safeguards to protect the trees from construction sprawl during the construction phase.

The proposed scheme has been appropriately designed and does not require modification from an arboricultural perspective. Protection of the trees, which are all to be retained during construction, is achievable subject to appropriate safeguards, tree protection measures and principles for appropriate site-specific sensitive methods of working which are noted in this report. This site-specific assessment has been made which provides parameters to follow to reduce the potential impact to the trees while protecting as much of the root system of trees from direct physical damage. If carried out sympathetically with appropriate tree protection measures this will greatly reduce the negative impact to the trees, which in turn will reduce the visual impact to the broader amenity of the area and we see no arboriculturally related reason for planning approval to be withheld.





Documents Supplied

Vasudevarao Chintapalli Supplied the following documents prior to the site visit:

1. Site Map	Date: 12.08.2024	Dwg No: 24_ 06_P02	Rev: -
2. Existing Plan	Date: 12.08.2024	Dwg No: 24_ 06_E01	Rev: -
3. Existing Roof Plan	Date: 12.08.2024	Dwg No: 24_ 06_E02	Rev: -
4. Existing Elevations & Sections	Date: 12.08.2024	Dwg No: 24_ 06_E03	Rev: -
5. Existing Site Photos	Date: 12.08.2024	Dwg No: 24_ 06_E04	Rev: -
6. Proposed Plans	Date: 12.08.2024	Dwg No: 24_ 06_P03	Rev: -
7. Proposed Roof Plans	Date: 12.08.2024	Dwg No: 24_ 06_P04	Rev: -
8. Proposed Elevation & Sections	Date: 12.08.2024	Dwg No: 24_ 06_P05	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, 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 believed to be within a Conservation Area, though, it is not clear if the trees are subject to a TPO on, and adjacent, to the site. 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 uncertain.
- 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 the Client's Representative at the time of inspection, but no other 3rd parties.
- 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** or (Dashed line) & 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).



Trees (T2-T4) Trees Located Significant Distance from Proposed Replacement Clubhouse





3.0 Arboricultural Impact Assessment/Appraisal & Protection Strategy

3.1 The subject property is located on the west side of Croft Way under the planning jurisdiction of the London Borough of Camden. The primary trees of interest are located in within the rear gardens of the neighbouring properties. The property is located within a Conservation Area, but it is not known if any of the trees are subject to a TPO. The tennis club is relatively land locked with only pedestrian access off of Croft Way through a narrow pedestrian gate in the boundary wall. The site has substantial walls bounding the perimeter and to the west is a large substantial reservoir, none of the features are being altered as part of this application proposal. The ground level surrounding the Clubhouse will remain unaltered at their current level with a small section of the informal spectator seating area likely to be utilised for some material storage during the construction phase as shown.

3.2 Tree Condition Assessment:

Having inspected the trees in the neighbouring garden at a distance: The Silver Birch (T1) is a very mature established specimen of good form but limited vigour; The Ash trees (T2&T3) are growing with adjoining trunks at the base, of semi-mature and over-mature age class and condition, of limited vigour and the Ash (T3) is of poor form; The Sycamore (T4) is a mature specimen with good vigour and form. All these trees are growing at sufficient distance that their current relationship will be unaffected by the proposed scheme. Trees (T1,T2&T4) have been assessed to be BS:5837 category B trees, Tree (T3) has been assessed to be BS:5837 category C. All the trees are to be retained and protected during the proposed development works.

🌿 Silver Birch (T1) is a large mature specimen which has passed its active growing stages of its life cycle. The tree has a well-formed crown which is formed on a clean vertical trunk which is growing two gardens away behind a large brick and concrete building some distance from the proposed replacement club house. The tree is a good size and provides some amenity value to the broader conservation area. The tree is growing at a reasonable distance from the existing Clubhouse and the proposed replacement Clubhouse structure. The specimen is mature and the theoretical radial RPA of the tree does not conflict with the proposed building works and is sufficiently far enough away to be unaffected by where the Clubhouse is to be constructed. The crown of the tree is substantially far enough away to be unaffected by the proposed new structure. The tree has a modest crown spread and the distance to the new structure would have a similar relationship.

🌿 No pruning of the tree is required for the proposed development works assessed as part of this report. The tree's roots are proposed to be protected by retaining the existing substantial historic brick boundary wall which will not be altered as part of the proposed scheme.





- ☼ Ash (T2) is an over-mature specimen of slender form and limited vigour. The tree is very tall and slender and slightly sparse crown formed at a very high level. The tree is growing with a conjoined trunks with Ash (T3) both of which are growing on a relatively high mound of soil formed up against the boundary wall. The tree is slender but has some value to the broader amenity of the conservation area when combined with nearby trees. The tree is growing at a good distance from the Clubhouse and the proposed replacement Clubhouse. The specimen is over-mature with a large longitudinal cavity running down its trunk and the theoretical radial RPA of the tree does not conflict with the proposed building works and is sufficiently far enough away to be unaffected by the location of the proposed replacement Clubhouse to be constructed. The crown of the tree is suitably far enough away to be unaffected by the proposed extension. The tree has a relatively small high crown and the distance to the new structure would have a similar relationship to the existing one.
- ☼ No pruning of the tree is required for the proposed development works assessed as part of this report. The tree's roots are proposed to be protected by retaining the existing substantial historic brick boundary wall which will not be altered as part of the proposed scheme.
- ☼ Ash (T3) is a semi-mature specimen of very slender contorted form and limited vigour. The tree is very slender, growing at a significant angle with sparse crown formed at a high level. The tree is growing with a conjoined trunks with Ash (T2) both of which are growing on a relatively high mound of soil formed up against the boundary wall. The tree has a slender poor-quality form and has no significant amenity value to the broader conservation area. The tree is growing at a good distance from the Clubhouse and the proposed replacement Clubhouse. The specimen is semi-mature with a very substantial growth lean and the theoretical radial RPA of the tree does not conflict with the proposed building works and is sufficiently far enough away to be unaffected by the location of the proposed replacement Clubhouse to be constructed. The crown of the tree is suitably far enough away to be unaffected by the proposed extension. The tree has a relatively small high crown and the distance to the new structure would have a similar relationship to the existing one.
- ☼ No pruning of the tree is required for the proposed development works assessed as part of this report. The tree's roots are proposed to be protected by retaining the existing substantial historic brick boundary wall which will not be altered as part of the proposed scheme.
- ☼ Sycamore (T4) is a mature specimen with good vigour which is growing in the neighbouring garden and has good crown form, though the tree's trunk is covered with Ivy limiting a more detailed assessment. The tree has been re-reduced a number of times in the past and the re-growth would benefit from further cycle of pruning. The specimen is mature and the theoretical radial RPA of the tree is sufficiently far enough away to





be unaffected by the location of the proposed replacement Clubhouse to be constructed. The crown of the tree is suitably far enough away to be unaffected by the proposed extension. The tree has a relatively small high crown and the distance to the new structure would have a similar relationship to the existing one.

- ✿ No pruning of the tree is required for the proposed development works assessed as part of this report. The tree's roots are proposed to be protected by retaining the existing substantial historic brick boundary wall which will not be altered as part of the proposed scheme.

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.
- 3.4 None of the trees (with the exception of T2) had any obvious significant decay pockets or dead/dysfunctional surface roots or major scaffold stub limbs which could become, biomechanical weak points.

Regular inspections of the retained tree(s) by a suitably trained or experienced arboriculturalist should be carried out. Subsequent remedial works if identified 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.

3.5 **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 replacement Clubhouse works, to reduce the any potential conflict and likely negative impact of the installation of the development proposal. The proposed works are to remove the existing clubhouse and replace it with a new engineered panel construction club house. This is to replace the existing structure within the same footprint while improving the quality of the structure; its energy efficiency and internal configuration, which will all be carried out outside of the root zones of the established trees in the neighbouring gardens. Plans reviewed by WCEL indicate the footprint area and discussions have been had between WCEL and the client's representative to confirm the low impact construction solutions being used and safeguards for construction.

The replacement Clubhouse will be located in the location of the existing Clubhouse which requires very little demolition due to its poor condition. The demolition is all well outside the RPAs of the trees being retained, even so the existing structure will be dismantled by hand due to limited access and will be carefully broken up and removed to the front entrance of the site using the existing pedestrian access footpath.





All new pathways, decking and soft landscaping areas within the Root Protection Areas (RPAs) of the retained trees have been designed using no-dig, up and over construction and constructed over the existing surface 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.

3.6 **Site Levels:**

The plans and elevations show the location and position of the replacement structure which will have a floor level the same as the existing Clubhouse. The existing substantial boundary walls is to remain unaltered. WCEL consider that care must be taken when storing and moving materials to the public highway to make sure that any vegetation on route is not damaged by material movement.

The prescribed working practices outlined and discussed work in favour of the scheme which shows the existing levels will be relatively unchanged outside of the replacement clubhouse footprint. No other significant level changes should occur within the root protection zone of any of the retained tree(s), unless otherwise discussed with WCEL and subsequently approved by the LPA, as assessed as part of this report.

3.7 **Precautionary Working Practices for Foundation Solution:**

Based on the theoretical radial RPAs, there is no percentage incursion into the RPAs of any of the trees for the proposed replacement . WCEL consider this scheme is acceptable, subject to the careful sensitive final installation

Precautionary working practices are recommended to avoid compaction to the ground during construction works, moving materials to and from the rear of the site, prior to the main above ground structure being installed. After the base/slab has been installed this can then become part of the operational platform to work from.



Access to and from Site Along Pedestrian Entrance Path





3.8 **Crown to Building Relationship:**

The existing height and location of all of the crowns (T1-T4) are such that the proposed replacement structure would not require any additional pruning of the trees to achieve the proposal beyond that already required on site.

There is some minor deadwood that should be monitored regardless of the proposed clubhouse construction. No additional pruning of the upper crowns of the trees is required to facilitate the construction of the building due to the sufficient distances involved.

3.9 **Retention of Site Porosity and Moisture Distribution Precautions:**

There are often a number of elements of concern on such a site regarding the affect that the loss of captured precipitation from the new structure would have. Given the presence of the existing clubhouse and distances from the trees there will be no significant change to the existing porosity. With existing surface water run-off from the building being allowed to follow the route of the existing run-off. We consider this will have limited impact so there will be very little loss of porosity and gaseous exchange near to the trees, given the distances involved.

There is no new pipe work or drainage within the retained trees RPAs. New down pipes from the slightly enlarged roof will run to the existing surface water drainage connection so we consider the impact to be neutral.

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

The proposed replacement of the clubhouse is sited over the footprint of the existing clubhouse, so none of the proposed footprint is within the RPAs of the trees T1-T4. Some safeguards will be required to protect the trees along the entrance path by using tree protection fencing. The existing entrance path will remain as existing which will act as tree root ground protection, and this again helps to limit the impact to the trees, utilising the principles of careful site working and tree protection fencing while minimising disturbance. Ground protection boards must be put in position to protect the lawn/soil areas while demolition and construction work are undertaken, especially if the ground is wet.

3.11 **Services Routes and Drainage Connection:**

The main services routes and drains are located at the north western corner of the existing clubhouse connecting out to the public highway and this will remain as existing. The existing drainage and services will remain the same as currently on site and will just be connected to, which will be in the area outside the retained trees RPA/RPZs. Therefore, all the drainage and services can be positioned to enter and exit the new replacement clubhouse, with water and electric running from the existing connection points within the footprint of the existing clubhouse that is being replaced. Should any changes be required for drainage connections, this must be outside the RPA of the tree unless agreed with WCEL in advance. 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 away from the retained protected trees.





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, where it is not already shown on the reviewed plans. The proposed services and connection route are to be indicated on the plans.

3.12 **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 WCEL's site visit, it is considered that the RPAs of all the trees will be the general theoretical radial root protection areas. However, the replacement structure is sufficiently far enough from the RPAs of all the trees, that based on the theoretical radial root protection area, the foundations of the replacement Clubhouse there would be no segmental incursion into the root protection areas, so we consider the likely impact to negligible, if at all.

Currently, there is no significant structure proposed within the theoretical RPA of the trees proposed for retention. Therefore, there will be no incursion into the theoretical RPA of any of the trees surveyed as part of this report. However, we consider growing conditions and root morphology will have adapted due to the presence of the substantial boundary wall present between site and the neighbouring trees, so the root activity will not be present within the site. Material consideration has been given to act in a cautious way so tree protection fencing measures are detailed as part of the construction working area, this should reduce the potential of the negative effects on the retained trees of construction material movement to and from the works area. Appendix A shows the Theoretical Radial RPAs (in **Pink or Green Dashed**) (where applicable) of the retained tree and the site-specific Theoretical RPA is illustrated in **Orange** (where applicable).

3.13 **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 and this will influence the tree protection measures.

It can be seen from the plan in Appendix A that some tree protection fencing measures will be implemented for the trees along the pedestrian entrance path to protect the trunks of the trees from abrasions of material's movement.

However, work near the trees even outside the RPAs shown on the plan must still be undertaken with due care and following the guidance recommended in this report. In arboricultural terms, and subject to recommended tree protection measures, where required, are considered acceptable. Tree protection fencing





for the trees is to avoid damage to their trunks. If implemented with appropriate care, this should not be sufficiently detrimental to the implementation of the Clubhouse construction. This is in addition to retaining the existing pedestrian entrance path hard standing to act as tree root ground protection to avoid any damage or compaction of the soil below the existing surfacing. If implemented with appropriate care, this should help avoid significant detrimental tree impact.

Tree Protection Fencing:

As a standard protocol 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 the trees 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). Therefore, a sign should still be attached to the tree protection fencing and boundary wall to remind contractors not to venture into the neighbouring garden.

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

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

The Plan Dwg No: WCEL/PEW/TSCP1&TPP1/REV1 in Appendix A, identifies recommendations for tree protection fencing locations shown in Yellow.

Examples of Tree Protection from similar sites:





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.

Tree Root Ground Protection:

Some of the proposed works will require access close to some of the RPAs/RPZs of retained trees and areas that would otherwise be protected with Tree Protection Fencing/Barriers. Given there is sufficient distances between the trees and the construction area no significant tree root ground protection will be required for this proposed replacement Clubhouse or for light material storage.

As noted, there should be sufficient space for some circulation/working space for demolishing any existing structures, for the insertion of foundations and construction to take place. 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 (WCEL) or the LPA's arboricultural officer must be contacted prior to any works be planned or implemented.

The Plan Dwg No: WCEL/PEW/TSCP1&TPP1/REV1 in Appendix A, identifies recommendations for tree root ground protection locations shown in Light Blue.

(if applicable) 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/manager for review by the arboricultural consultant.

In the event that more ground protection was to become needed, within or close to the RPZ of the retained tree(s): GP1 ground protection is considered sufficient and the locations requiring ground protection are shown 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 WCEL's arboricultural consultant must be contacted prior to any works being planned or implemented.

- 3.14 Reference should be made to the tree survey schedule in Appendix B for details of tree(s) on an individual basis.
- 3.15 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 and may not cover all of the points that could be brought up during the construction process. However, having viewed the plans to date for the proposed scheme, based on the points reviewed and recommendations detailed below, we consider the scheme can be achieved with no notable disturbance to trees T1-T4 on the adjoining properties, which are to be retained and protected during the development process.
- 4.2 There are no significant trees to be removed as part of the implementation of the scheme.
- 4.3 The distance from the trees to the replacement Clubhouse reduces the potential for negative impact of the new structure. The retention of the pedestrian path reduces the impact of potential disturbance and retains access space for construction and for delivery of some lightweight deliveries.
- 4.4 The contractor must follow the precautionary investigation techniques and inspection review outlined in section 3 of this report. If carried out sensitively and with care this will maintain the impact of the development works to a minimal level. Subject to appropriate tree protection, where required, the impact to the trees will be greatly minimised.
- 4.5 The removal, or breaking up, of the Clubhouse, is well outside of the Theoretical Radial RPA of the retained tree T1-T4. The retained pedestrian access path will remain at their existing level, even so this will still require sensitive working practices. It must be made clear within any contract documents that there will be no additional excavation beyond the proposed Clubhouse foundations unless prior approval is given. Subject to appropriate precautionary measures and appropriately specified construction detail (including building materials) which must be adhered to, these works should be acceptable.
- 4.6 Use of ground protection measures is a reasonable way of maintaining root protection for the retained trees and avoiding compaction, which is particularly important when the ground is moist and becomes more prone to compaction, though there is enough distance between the trees and general works.
- 4.7 Subject to precautionary measures as detailed above including tree protection fencing as shown on the plan in appendix A, the measures will protect the soil around the trees and their trunks from abrasion.
- 4.8 Arboricultural watching brief site supervision of the excavations is not considered necessary for the works proposed. However, if the LPA condition this then this should be undertaken by a suitability qualified or experienced person such as WCEL as arboricultural consultants.





5.0 **Recommendations:**

- 5.1 It is advised where WCEL have recommended key important design features or precautionary protection measures they should be adhered to, but in the circumstances of a small short-term project, such as this, some minor variations can be used to protect the tree and the roots within the soil if implemented with due care and sensitivity. Variations to the recommended specification or precautionary measures are at the contractors, architect or client's discretion and risk, but must be approved by WCEL or the tree officer prior to implementation.
- 5.2 Notwithstanding all the relevant sections of this report particular attention is drawn to section 3, in addition to Appendix A of this report. A specialist tree or landscape officer should periodically inspect the site to see that the scheme has complied with WCEL's recommendations and/or guidance. Alternatively, the LPA can condition WCEL to inspect the tree protection measures once installed to confirm compliance and a site note can be sent to the LPA to confirm compliance.
- 5.2 Site Monitoring – An individual e.g. the Site Agent, Architect or WCEL's retained arboricultural consultant, must be nominated to be responsible for all arboricultural matters on site. This person must:
- Be present on the site throughout the project or at agreed times to ensure tree protection measures are followed (where applicable).
 - Be aware of the arboricultural responsibilities.
 - Have the authority to stop any work that is, or has the potential to cause harm to any tree.
 - Be responsible for ensuring that all site personnel are aware of their responsibilities towards trees on site, and adjacent to the site, and the consequences of the failure to observe those responsibilities.
 - 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 WCEL consider protectionary measures can be achieved with the appropriate caution and sensitivity.

Report Date: 16th November 2024

Rev 1: n/a

Mr Philip E Wood *BSc(Hons) LAM*
Principal Consultant & Director - Wood Consulting Environmental Limited





Appendix A

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

***West Hampstead Lawn Tennis Club, off Croft Way, Ferncroft Ave, NW3 7PQ
TSCP1 TPP1 Plan Nov 2024 Rev1***



Significant Area of Decay on Trunk of Neighbours Tree (T4)- No RPA Conflict





Wood Consulting
Creating the green infrastructure

Tree Survey Constraints & Tree Protection Plan

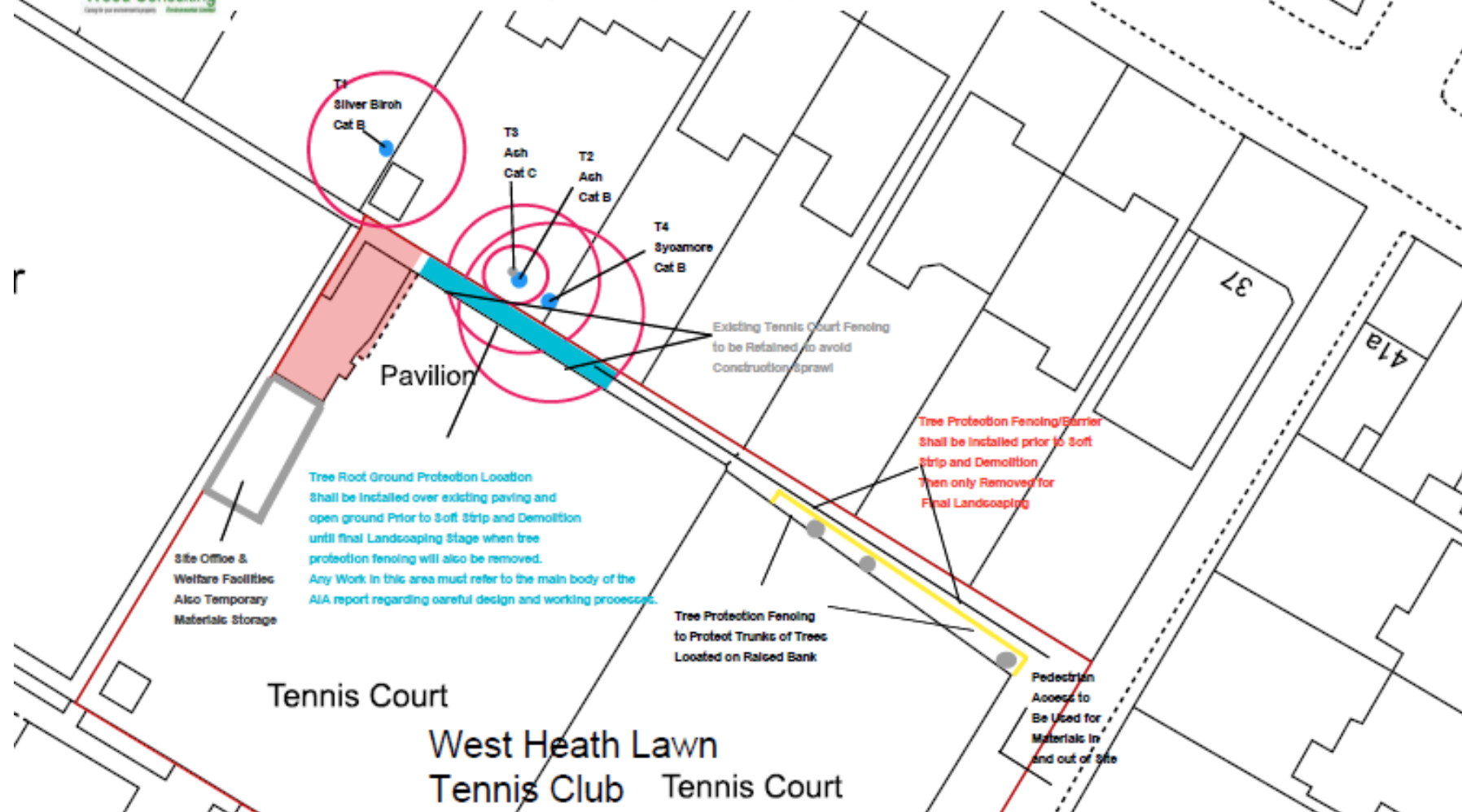
Theoretical Radial Root Protection Area Shown in Pink

Site Specific Adjusted Root Protection Area Shown in Orange

Dwg No: WCEL/PEW/TSCP1&TPP1/REV1 Date: 16/11/2024 Annotated by: Philip Wood

Indicative Plan: Do Not Scale Check all Measurements on Site against Schedule B in the Main AIA Report

NOTE
DO NOT SCALE OFF THIS DRAWING
CONTRACTOR TO VERIFY ALL DIMENSIONS ON SITE
CROSS REFER TO ALL RELEVANT SPECIFICATIONS, SCHEDULES,
DETAILS AND CONSULTANTS DRAWINGS
THIS DRAWING IS BASED ON SURVEY INFORMATION BY OTHERS





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	Silver Birch (NT)	15		Est 530	6.36	127.09	6.0				4.0	5.0	M	Mature specimen in later stages of its life cycle. Located in neighbouring rear garden the other side of substantial concrete and brick garden building and behind boundary wall with deep footings significant distance for boundary of site. Recommendations: NWR for Development.	20-40	B
T2	Ash (NT)	15		Est 510	6.12	117.68	4.0				5.5	3.5	O/M	Stressed specimen with Inonotus fungal brackets present. Tree has had a number of Limbs removed in the past. Which has left low pendulate branches, though, not over site. Large wound and decay @ 1m AGL on East side of Trunk. Tree is 9m from corner of Clubhouse. Recommendations: NWR for Development.	20-40	B
T3	Ash (NT)	12		Est 200	2.4	18.09	3.0	3.0	3.0	4.5	3.5	4.5	S/M	Sub-dominant tall very slender specimen with very substantial growth lean. Located adjacent T2 both on large raised mound. 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						
T4	Sycamore (NT)	14		Est 600	7.2	162.88	2.5				4.5	3.5	M	Mature specimen densely covered in Ivy restricting inspection of trunk and main scaffold limbs. Specimen of good crown form growing 12m from the proposed location of replacement Clubhouse. Recommendations: NWR for Development.	20-40	B

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



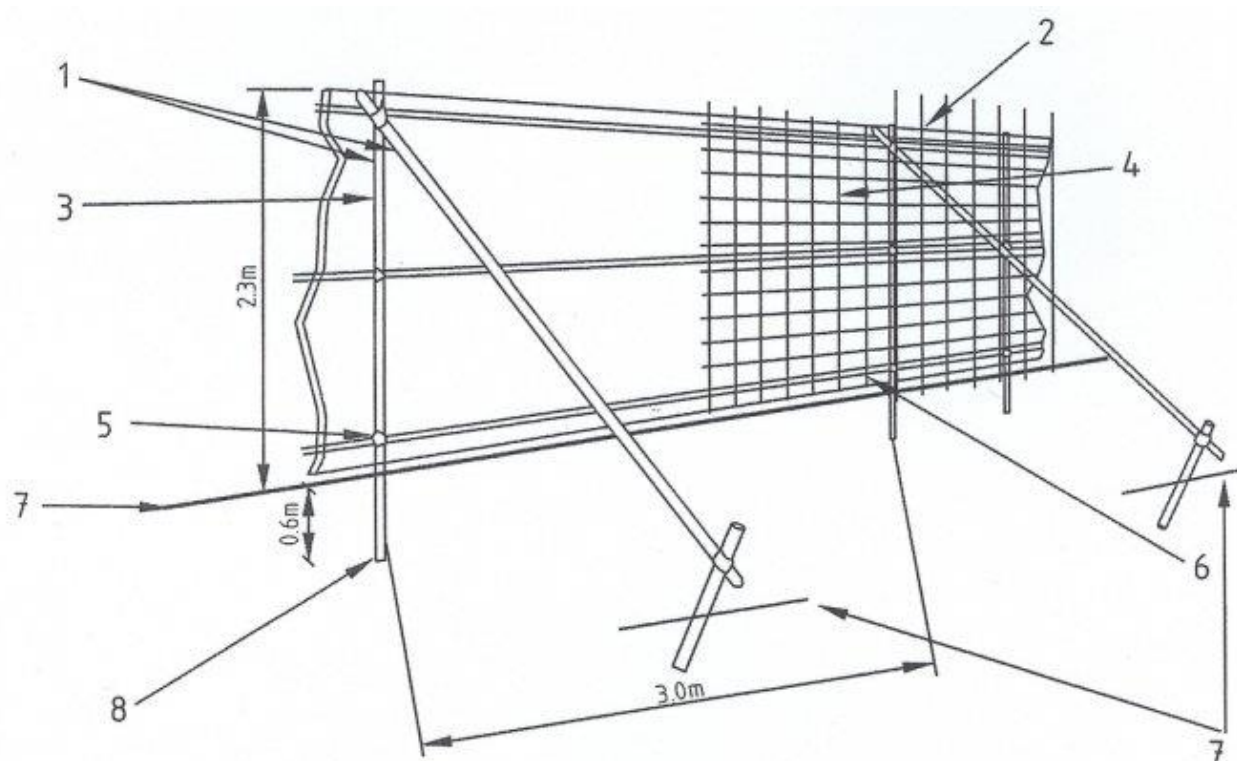
Appendix C





BS 5837: 2012

Tree Protection Barrier/Fencing



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

Figure 2. – Protective fencing for RPA





End of Report

