

LAND ON THE
NORTH-EAST SIDE
OF
PROVIDENCE HILL
BURSLEDON
SOUTHAMPTON

ARBORICULTURAL
IMPACT
ASSESSMENT

for

VESTED OUTSOURCING
PARTNERS LTD.



Ecology
Archaeology
Arboriculture
Landscape Architecture

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1. Executive Summary

- 1.1. The site comprises a large triangular shaped parcel of land on the north-east side of Providence Hill, Bursledon, Southampton. There is extensive group tree cover on the northern and southern boundaries, established individuals on the eastern boundary together with a number of small internal individuals.
- 1.2. Historically the site was the subject of an extant planning approval ref: O/17/80899. This planning approval has lapsed, and a new mixed use planning application is proposed. The new application is similar in design to the historic application, with identical access footprint and designed in line with a previously agreed 15m RPA for the Veteran Oak on the Northern boundary in line with BS5837:2012.
- 1.3. The new design proposals include a significantly larger area afforded to the RPA of the Veteran English Oak on the Northern boundary (T23), equal to 15 times the trunk diameter (21m). Due to the increased RPA for this specimen.
- 1.4. The site is to be re-developed with the construction of a number of residential units, associated garden space and roadway infrastructure, together with a Veterinary Practice. A new access point onto Providence Hill is proposed. The proposed access position is identical to that previously shown on approved plans. The position of the access point has been guided by the associated highways constraints meaning that excavation will be required to achieve an acceptable incline of the surface. A bespoke sensitive surface foundation design is also to be implemented to minimise impact to adjacent trees.
- 1.5. A small number of low-quality trees are identified for removal to implement the new access point, proposed dwellings, and veterinary practice. The removal of these trees will be compensated for by replacement planting within the wider landscape design. It is also considered that the area proposed for the new access in the area of lowest impact along the roadside boundary.
- 1.6. This impact assessment is intended to evaluate the direct and indirect effects of the proposed design on the trees on site, and where necessary recommends mitigation.
- 1.7. The development proposals are in accordance with BS5837:2012 'Trees in relation to design, demolition and construction – Recommendations'.
- 1.8. Adequate protection can be provided to ensure all retained trees are protected throughout development in the form of barriers and/or ground protection.
- 1.9. Given the number of trees on the site, the development proposals incorporate the majority of the better, more sustainable specimens, with All of the A and B category trees are to be retained and protected throughout the development.

1.10. All of the trees proposed for removal are in the lower two categories, C and U, and are not of a quality that should represent any constraint to development.

1.11. Number of trees to be removed as a direct result of the current design (see section 4 for details):

BS Category	Number of individual trees	Tree Groups
U	~	~
A	~	~
B	~	~
C	1	2

1.12. The relationship between the buildings and retained trees is sustainable and does not result in any situations which may result in unreasonable pressure to prune requests from future occupants.

1.13. An Arboricultural Method Statement (AMS) should be compiled in conjunction with a Tree Protection Plan (TPP) for the purpose of feasibility and planning, as per Figure 1 of BS5837:2012. These detail any mitigation which will be necessary to ensure the protection of retained trees throughout the development.

2. Introduction

- 2.1. ACD Environmental was instructed in May 2022 to prepare the following impact assessment by Vested Outsourcing Partners Ltd.
- 2.2. This report is based on the recommendations given in BS5837:2012 'Trees in relation to design, demolition and construction – Recommendations'.
- 2.3. Data is extracted from, and reference should be made to, the tree survey which preceded this report. (ACD Ref: PRI23221tr). This is an update of the historic tree survey data and arboricultural impacts associated with the site.
- 2.4. This assessment is based upon the supplied layout drawing by Boyle+Summers Ltd., drawing reference: BUR-BSL-ZZ-XX-DR-A-1501-PL-G.
- 2.5. The site does not stand within the Bursledon Windmill Conservation Area. On-site trees are not subject to an Eastleigh Borough Council Tree Preservation Order.
- 2.6. The controlling authority is Eastleigh Borough Council (EBC), who can be contacted at:

Eastleigh House, Upper Market Street, Eastleigh, SO50 9YN. (023) 8068 8068
- 2.7. This report was revised (rev A) in December 2022 to reflect more detail regarding the Impact of the access and services proposals and the protection measures surrounding the Veteran Oak T23.



Figure 1 Overview of development area.

3. Arboricultural Impact Assessment

- 3.1. The site is to be redeveloped with the construction of a new Veterinary Practice, together with a number of residential units, associated garden space and roadway infrastructure.
- 3.2. A new access point onto Providence Hill is proposed. The position and footprint of the access point has been guided by the associated highways constraints and is identical to the historic alignment. No additional trees apart from the x4 'C' category trees within G6 are to be removed to facilitate the access point.
- 3.3. This impact assessment is intended to evaluate the direct and indirect impacts on the trees on the site in relation to the proposed development. Where appropriate mitigation is proposed, with details given of any issues to be addressed by the arboricultural method statement to ensure the development is acceptable in arboricultural terms.
- 3.4. Any potentially damaging activities proposed in the vicinity of retained trees are identified, such that mitigation to significantly reduce or avoid this impact can be detailed in an Arboricultural Method Statement and Tree Protection Plan as recommended in BS5837:2012 section 5.4.2.
- 3.5. The tree survey for the site is at Appendix 2 of the Tree Report for the site ACD reference PRI23221tr dated August 2021.

3.6. Evaluation of impact of proposed tree losses

- 3.6.1. The following trees are identified for removal.

No.	Species	BS Category
T1	Horse Chestnut	C
G1	Mixed species	C
G6	Mixed species	C

- 3.6.2.

Table 1: Trees to be removed as a direct consequence of development

BS Category	Number of individual trees	Tree Groups
U	~	~
A	~	~
B	~	~
C	1	2

- 3.6.3. Mixed species group no. G6 is to be removed to implement the new access point. The area has an existing access point which is to be enlarged and improved as a result of the development proposals.
- 3.6.4. Due the existing soil bund located along the stem line of the trees along the roadside boundary, as well as the requirements of acceptable inclines for highway designs, where the proposed surfacing footprints encroaches into the RPA of adjacent Oak trees T50 and T51 a no-dig approach will not be feasible, therefore all excavation in these areas have been specified as sensitive excavation and are to be carried out under direct supervision of the project arboriculturist. See the corresponding Method Statement (PRI23459ms) for details of methodology to be used. In addition to this a bespoke technical road foundation is to be used which will reduce help reduce required excavation and include foundations which are positioned radially to the trees.
- 3.6.5. The remaining trees to be removed are category 'C' specimens found within the interior of the site. The removal of these low category trees is to be compensated for by replacement planting as part of the wider landscape proposals.
- 3.6.6. All the trees proposed for removal are in the two lower categories (C & U) and as such it is judged that they are not of a quality that should present any constraint to development of the site.
- 3.6.7. In terms of the effects of the tree loss required to implement the design, the trees to be removed are not of a quality to have any significant adverse impact on the surrounding area. Any impact and loss of amenity which may be felt locally will only be short term.
- 3.6.8. The boundary group to be removed for the access point are considered unremarkable trees of very limited merit, such that they can be replaced with tree planting as part of the landscape proposals, (or even future residents).
- 3.6.9. In relation to the conception and design of development proposals, BS5837:2012 section 5.1.1 states: The constraints imposed by trees, both above and below ground should inform the site layout design, although it is recognised that the competing needs of development mean that trees are only one factor requiring consideration. Certain trees are of such importance and sensitivity as to be major constraints on development or to justify its substantial modification. However, care should be taken to avoid misplaced tree retention; attempts to retain too many or unsuitable trees on a site can result in excessive pressure on the trees during demolition or construction work, or post-completion demands for their removal.

3.6.10. It is therefore deemed acceptable to remove the listed trees and, as part of the detailed landscape design for the scheme, include suitable and sustainable replacements as and where appropriate.

3.7. Trees to be pruned

3.7.1. No pruning works are required to implement the development, and tree surgery works are not anticipated (excluding tree removals). Should any become necessary it should comply with BS3998:2010 Tree Work or more recently accepted arboricultural good practice and be submitted to and approved by Eastleigh Borough Council prior to any commencement.

3.8. Protection for retained trees

3.8.1. BS5837:2012 section 6.2.1. states: 'All trees that are being retained on site should be protected by barriers and/or ground protection (see 5.5) before any materials or machinery are brought onto the site, and before any demolition, development or stripping of soil commences. Where all activity can be excluded from the RPA, vertical barriers should be erected to create a construction exclusion zone. A specification for protective fencing is given on the Tree Protection Plan. This consists of interlocking weld-mesh panels (e.g. Heras) well braced by attachment to scaffold pole uprights driven firmly into the ground. Should any alternative method of barrier construction be proposed, consultation with the project arboriculturist will be obtained to clarify the efficacy of the revised design prior to informing the local planning authority and obtaining their consent.

3.8.2. The proposed layout was previously designed in line with a previously approved planning application for the same development boundary ref: O/17/80899, which included agreement of use of a 15m RPA in line with BS5837:2012 for the Veteran English Oak T23 on the Northern boundary which was agreed during a site meeting held on 13th March 2018 with ACD and representatives from EBC including the Tree Officer.

3.8.3. Recent requests from EBC have required an increase the previously agreed RPA of this tree to 21m in line with a different standard (Natural England), this has required a re-design of the layout and the loss of original plots 1 & 2 to ensure there is no encroachment into this larger area of RPA however this has mean that the proposed retaining wall now runs inline with the edge of this area. In order to provide working room to install this retaining feature the TPF has been offset by 0.5m. This will cause a minor amount of exposure along the periphery of the RPA, however this is adequately offset by additional space provided within the CEZ both onsite and offsite.

- 3.8.4. Where the locations of retaining feature are located along the periphery of retained RPAs, these areas will first be excavated sensitivity by hand to a depth of 600mm to ensure no significant roots over 25mm are present before the remaining depth is excavated using conventional means. See the corresponding Method Statement (PRI23459ams) for further details.

3.9. **Barriers**

- 3.9.1. BS5837:2012 figure 2 recommends a default specification for protective barrier. This is a weld mesh panel design, mounted against well braced scaffold uprights. This is perfectly adequate for this site where there are to be areas of high intensity development. An illustration of this design can be found on the Tree Protection Plan.
- 3.9.2. A 0.5m offset has been allowed from all proposed surfacing and the Tree Protection fencing.
- 3.9.3. A1.5m offset has been allowed for working room between all proposed building and the Tree Protection fencing.
- 3.9.4. All tree protection fence should be erected before any works start on site whatsoever clearly indicated as Tree Protection Fencing by signage.

3.10. **Demolition**

- 3.10.1. There are a number of small out buildings to be removed on-site. These structures are considered low key and can be removed without impact to the surrounding rooting environment.
- 3.10.2. To ensure damage does not occur to trees highlighted for retention, tree protection fencing must be erected prior to plant machinery entering site whatsoever. This should be subject to a pre-commencement site meeting between the developer, their project arboriculturist and a representative from the Local Authority.
- 3.10.3. No special demolition procedures need be observed on this site, other than respecting the tree protection fencing.

3.11. **Construction footprint within RPAs**

- 3.11.1. The construction footprint of all proposed buildings have been sited outside the RPAs of trees identified for retention.
- 3.11.2. Low impact wooden garden sheds are proposed along the northern boundary. Where these are unavoidable within the RPAs of adjacent trees. An above surface concrete slab will be used to minimise the impact to the underlying rooting environment.

3.12. Shade and future pressure to prune

- 3.12.1. The site layout has been assessed in terms of shading and future pressure to prune. Given the orientation of the site, and the relationship between the proposed buildings, veterinary practice and the retained trees, the juxtaposition is viable for long-term tree retention, and it is considered that shading by trees is unlikely to be a concern to future residents. As a result, it is considered unlikely that there would be any undue pressure to remove trees, or excessively prune from any future occupants.

3.13. Services

- 3.13.1. Full details of the service and utility provisions for the site remain to be finalised. It is fundamental to tree protection that infrastructure design is sensitively approached, as trenching close to trees may damage roots and affect tree health and stability. Constraints posed by retained trees must be passed to the infrastructure engineers to inform their design, ensuring that all services avoid areas of potential conflict.
- 3.13.2. The Tree Protection Plan shows the location of drainage surfaces which are located outside of retained RPAs.
- 3.13.3. The proposed footprint of the SUDs basin and the connecting drainage culvert are located outside of retained RPAs and allowed 0.5m working room to the from the TPF.
- 3.13.4. Given the potential for far reaching roots outside of the RPA from both trees adjacent to the proposed culvert connection, a secondary TPF position has been specified alongside sensitive excavation under direct supervision. Roots discovered during this excavation are to be carefully and cleanly cut by the project arboriculturist with assessment made as to the likely impact and root pruning may have to retained adjacent trees.

3.14. Levels and Landscaping

- 3.14.1. Due to the existing incline of the site multiple retaining walls have been proposed to create acceptable workable and habitable surfaces throughout the development.
- 3.14.2. Where a retaining wall has been specified within the 21m RPA of T23, a sensitive foundation design is to be used and all other existing levels to be retained, with soil levels to be raised to the south. Possible compaction due to these level increases will be abated naturally over time due to seasonal freeze/thaw and microorganisms within the soil. This area of proposed soft landscaping will still act as available rooting medium to the tree and be of a long-term benefit.
- 3.14.3. Where excavation for retaining walls is proposed within the RPA of trees on the boundaries a sensitive methodology should be used. Details of which can be found in the corresponding Arboricultural Method Statement (PRI23459ams).

3.15. Boundaries

- 3.15.1. All plot boundaries will need to be designed, positioned, and installed to avoid damage to retained trees. When within RPAs, this will include hand excavation of all post holes, and the lining of any post holes with a non-porous membrane to stop leachates from the concrete damaging tree roots.

3.16. Supervision & monitoring

- 3.16.1. The development process should be subject to arboricultural supervision and monitoring, especially areas where incursion into the RPA of retained trees is required. Therefore, a pre-commencement site meeting is advised with monthly site monitoring visits. Supervision is recommended during the installation of all special details, such as no-dig surfaces and construction. This should be detailed in the approved method statement and to provide comfort to the LPA, they are invited to include a planning condition to support this.

4. Conclusion & Recommendations

- 4.1. The development proposals are in accordance with BS5837:2012 'Trees in relation to design, demolition and construction – Recommendations'. Adequate protection can be provided to ensure all retained trees are protected throughout the development.
- 4.2. Any comments and recommendations made in section 3 should be noted and due consideration be given to the phasing and operational impact (and viability) of special construction techniques.
- 4.3. An Arboricultural Method Statement (AMS) has been compiled in conjunction with a Tree Protection Plan (TPP) for the purpose of feasibility and planning, as per Figure 1 of BS5837:2012. These detail any mitigation which will be necessary to ensure the protection of retained trees throughout the development

- 4.4. The AMS will include details of all tree protection measures discussed within this report and provision for site supervision, monitoring and reporting throughout the development.
- 4.5. Any fencing and other tree protection measures should be erected after tree surgery but before any demolition or construction contractor enter the site, and before any soil stripping takes place. It is recommended that protection measures are monitored during the development process by a representative of ACD or an alternative consultant acceptable to the LPA, who should be responsible to both the developer and the LPA for the enforcement of the protection as agreed by both parties.
- 4.6. There must be no changes in levels, service routing, machine activity, storage of materials or site hut positioning within areas to be protected and the protective fencing must remain in position for the duration of the construction process.
- 4.7. Surgery may also be required in order to allow trees to be retained close to structures, to allow access for construction or future site traffic, or in the interests of the future health and safety of the trees and users of the site. Detailed recommendations for surgery should be provided prior to site commencement. All surgery should comply with BS3998:2010 or more recently accepted arboricultural good practice.

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