



greenwillows associates ltd

Ecological Surveys • Habitat Management • Arboricultural Surveys • Vegetation Clearance

Estates Manager
Athlone House
Hampstead Lane
London
N6 4RU

4th February 2021

F.A.O Estates Manager,

RE: Dead Oak Tree at Athlone House, Hampstead Lane, Highgate, London

As instructed, Greenwillows Associates arboriculturist, Ian Lorman attended the site on 8th January 2021 to assess a dead oak tree and a holm oak in poor condition.

Legislation

The tree protection designations with Camden Council confirm that there are no Tree Preservation Orders (TPOs) on site (See Appendix Two), but the entire site is located within a Conservation Area, meaning that all live trees greater or equal to seventy-five millimetres diameter at breast height, (DBH), are legally protected. Whilst dead and/or dangerous trees are not 'technically' protected, it is a legal requirement to give at least five days written notice to Camden Council of intention to remove them or otherwise make them safe. The purpose of this procedure is to afford the Local Authority the opportunity to verify the trees' condition before the work is undertaken (and therefore to avoid the possibility of enforcement action).

Tree surgery or felling of live trees in Conservation Areas requires that six weeks written notice be given to Camden Council in accordance with S.211 of The Town & Country Planning Act 1990 (as amended).

Survey Methodology

The purpose of the survey of the dead oak tree (T1) was to determine whether it would be safe to retain it as a standing dead wood habitat (a.k.a. 'monolith'). See Appendix One for the location of the tree. The conclusions are informed by the aspect and exposure of the site to predicted wind forces, the sail area of the tree, the structural integrity of the wood of the trunk and the remaining branches and the surveyors experience of the timescales that dead oak trees can remain upright in similar circumstances.



Four core samples of five millimetres diameter were taken from T1 at approximately one metre above ground level at the four cardinal points (north, east, south and west) using a Hagl f increment borer. The core sample depth was approximately one-hundred millimetres (sufficient because hollowing of the trunk is not suspected).

It was not possible to establish the condition of the root plate at soil level due to the presence of a dense mat of bramble and other detritus, but Mr Lorman is confident that the condition of the buttress roots will be reflective of the high integrity of the heartwood in the trunk.

The height of the tree was measured, and the form and dimensions of the branch structure was observed.

Mr Lorman also visually assessed the adjacent holm oak, T2 (see Appendix One for the location) due to its poor condition.

Results

A summary of the survey results is summarised in Table One.

Table One: Summary Results and Recommendations

Tree ref. no.	Species	DBH (mm)	Height (m)	Recommended action
T1	Oak (<i>Quercus robur</i>)	Approximately 1,000	12	Retain following preventative tree surgery
T2	Holm Oak (<i>Quercus ilex</i>)	Approximately 1,210	18	Retain following heavy crown reduction

It is clear from the condition of T1 that it has been dead for many years and that honey fungus (*Armillaria* sp.) was almost certainly the cause. The estate manager suggested it has been dead at least fifteen years. Most of the bark has detached, leaving the underlying sapwood exposed, which has now completely degraded due, principally, to saproxylic fungal activity and then exacerbated by other flora and fauna. The sapwood that remains wrapped around the trunk and branches crumbles away readily in the hand. Beneath this ephemeral layer of crumbling sapwood is the core, or heartwood, of the tree. The core samples taken confirm that the heartwood has not decayed to any visible degree. The auger required a very firm action to gain traction into the material and the extracted cores possessed impressive compressive and tensile properties with a noticeable moisture content, consistent with what one would expect from a healthy oak tree. The cores imparted no fungal or mouldy odour, but that of freshly cut, tannin-rich, healthy timber. The branch structure is typical of an open-grown oak, lacking apical dominance, with an even, wide, spread. At its greatest extent, the south west side of the crown reaches eight and a half metres from the trunk. All fine twigs have long since been shed. Bark and pieces of sapwood continue to fall from branches.

The crown weight of T2 is heavily biased to the west due to the previous removal of a co-dominant trunk on the east side, which had died. Branch structure is very open, with at least one large phototropic branch on the west side. Foliage is sparse throughout, especially at the top and north sides. There are watershoots throughout the major branches, which are

spontaneous vertical shoots emanating from latent buds beneath the bark due to stress and/or exposure of previously shaded bark to sunlight. Suckers are growing at the base of the trunk.

It is considered that T2, a live holm oak, presents a much greater risk to health and safety than T1, mainly due to the symptoms and form predisposing it to major branch shedding. Branch shedding is likely to result directly from the tree retrenching and shutting off the massive, uneconomical branches whilst it attempts to regenerate a healthy crown at a lower height rather than resourcing large branches that are not generating a net gain through photosynthesis.

Holm oak commonly reacts well to heavy pruning, which effectively mimics storm damage and trees usually form a dense crown following such work, if they have sufficient stored carbohydrates to do so. The only downside is aesthetic, but the regenerated crown usually develops well after around three years.

Constraints

Physical access to the dead oak tree is uninhibited, subject to the approval of the Estate Manager. The site is located within a Conservation Area.

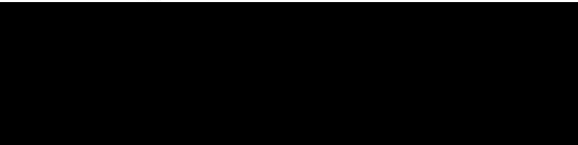
Conclusions and Recommendations

The oak tree, T1, is not in imminent danger of partial or whole collapse. It would stand for several decades, albeit in a modified form following pruning. For this tree to be retained as a standing dead wood habitat whilst virtually eliminating risk to person and property, preventative tree surgery works will be required. The purpose of the tree surgery would be to minimise the sail area against wind forces to greatly reduce the lever arm and the fulcrum at the root plate (at ground level) whilst maintaining a recognisable tree form (rather than just a standing trunk). This can be achieved by truncating the branches to a suitable distance from the main trunk, leaving them around three to three-and-a-half metres in length. Appendix Three indicates the approximate points of cut using red lines. This should be undertaken within twelve months.

It is recommended that T1 be inspected at least once every five years to undertake a repeat assessment.

For the holm oak, T2, it is recommended to undertake a heavy crown reduction, reducing the crown down to a height of approximately ten metres. This should be undertaken within twelve months.

Yours sincerely,



Steve Parnwell BA (Hons) MCIEEM FLS FRSA

Photos



T1



Core sampling of T1

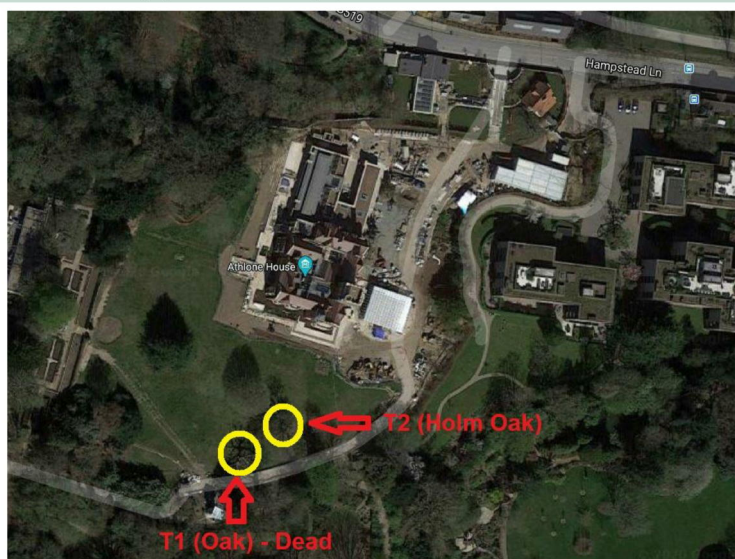


T2



T2 showing sparse upper and north sides

Appendix One: Location of Dead Oak (T1) and Live Holm Oak (T2)



Athlone House_Hampstead Lane
January 2021



Appendix Two: Email Response Regarding TPO

[Redacted]

Hi Ian

This location falls within The Highgate Village Conservation Area, so all trees have default protection.

However there are no TPOs at Athlone House.

[Redacted]

Appendix Three: Suggested Cutting Points for T1



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