

THE ARBORICULTURAL
CONSULTANCY LTD

ARBORICULTURAL REPORT

Malin House, Aldwick Bay

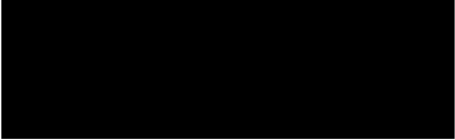
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Site Address:
Mailin House
The Close
Aldwick Bay
P021 4EP

The Arboricultural Consultancy LTD
3 Old Barn Way
Southwick
West Sussex
BN42 4NS

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Author(s) Name	Company	Position	Contact information
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Qualifications			Southwick
Foundation degree Arboriculture (level 5), Lantra Professional tree inspection.			West Sussex BN42 4NS 

Purpose of the Report:

To outline the tree condition, impact of ground works to trees and accompany application for tree removal for trees covered by a Tree Preservation Order (TPO).

Included within the Contents of this report is:

- Tree assessment detailing the health and condition
- Impact from retaining wall reinstatement

Date: 02 December 2020

Report prepared by: B Tidey

Email: ben@thearbconsultant.co.uk

Address: 3 Old Barn Way, Southwick, West Sussex, BN42 4NS

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Use of Report:

This report is to outline the conditions of 3 Holm Oak trees and the impact from the reinstatement of retaining wall.

Survey Method:

All tree inspections, unless specified, have been undertaken from ground level and using non-invasive techniques. Comments contained within the report on the condition and risk associated with any tree relate to the condition of the tree at the date and time of survey. Please note that the condition of trees is subject to change. This change may occur, but is not limited to biological and non-biological factors as well as mechanical/ physical changes to conditions in the proximity of the tree. Trees should be inspected at intervals relative to identified site risks and in accordance with relevant HSE and Central Government guidance. The Arboricultural Consultancy can provide further information on this matter if required. Where tree surgery works have been identified these works are based on the assumption that planning is approved, no tree works should be undertaken prior to determination of this application without up to date confirmation of the Tree Preservation Order / Conservation Area Status of the vegetation. All works should be undertaken in accordance with the appropriate Duty of Care. This should include, for example,

site specific risk assessments and due diligence inspections for the presence of protected species. Any comment relating to 3rd party trees has been made without full access to the tree(s). Should these trees have any impact on the proposed development we would advise you to instruct us to contact the third party and undertake further inspection work.

Introduction

The Arboricultural Consultancy Ltd was appointed to assess 3 Holm Oak - *Quercus ilex* these trees are located on a raised bank that has to its western side a retaining wall, this wall has significant damage and lean, it has been assessed to be close to failure. Tree root growth has caused direct damage to the wall and rooting has occupied the space created by wall movement. The retaining wall is on the boundary of *Mailin House* (tree owner) and *Sea Crest*, The boundary wall belongs to Mailin House and as such the owner is keen to address the damaged and dangerous wall.

An engineer's report was produced to provide information as to the walls function, stability, and information as to remedial work required to insure ongoing bank stability. The report states that if the trees are to be retained then a replacement wall or soil mound will be required that "will need to be constructed a distance to the west away from the boundary" this means there shall be an encroachment into the garden of Sea Crest. This has been discussed with the owner of Sea Crest and they are not willing to have any encroachment of any kind past the boundary wall line. It is also not possible to prune the tree roots as the impact will be significant and will result in large open wounds as well as a loss in rooting structure that is necessary for tree stability, nutrient and water uptake.

Inspection findings

The trees and boundary wall has been assessed by both a structural engineer *Peter Willmott CEng; FIStructE* and the arboricultural Consultant Ben Tidey FdSc Arboriculture.

It was deemed appropriate that these two aspects were assessed in order to help find a solution to the ongoing retaining wall collapse issue. The full report from the structural engineer can be found below in appendix 1, to summarise the findings; *"if the trees are to be retained the retaining wall or a sloped bank will need to be constructed to the west of the current wall within the garden of Sea Crest, if this is not possible the trees shall be removed and then the wall can be replaced."*

The findings from the arboricultural inspection can be found below in appendix 2, to summarise the findings; the three Holm Oak trees offer public amenity to the beach area and to the road of The Close. The trees are of good health and condition with minor defect as would be expected of trees of this age and type, the tree roots have applied direct pressure to the retaining wall and as the wall has deformed, roots have occupied this space. Retention of the trees would require the retaining wall being moved west in order to save roots and provide suitable growing space.

Discussion

Given the duty of care owned by the owner of Mailin House to mitigate the potential danger of their collapsing retaining wall and the requirement to reinstate this boundary it is clear that action is required.

The finding from the arboricultural report (appendix 2) finds the trees to be of good health and condition offering public amenity. The trees have grown in such a way that their roots now occupy the space required for the retaining wall, the roots that have formed are large and would be considered to be primary root buttressing, removal of these will have a detrimental effect on the trees health and condition.

The trees are likely using the wall directly (touching) or indirectly (soil integrity and cohesion) to maintain their stability. Removal of the wall could result in movement within the tree rooting area and a loss of soil cohesion and tree stability. The trees are subject to a Tree Preservation Order (TPO) this means that any action that results in the damage or removal of the tree is a prosecutable offence.

The structural engineers report states that *"The oaks has [sic] over a long period of time pushed upon the back of the wall so causing the current lack of verticality. This is such that the wall is now at risk of collapse"*. This statement is condemning the wall and as such remedial action is required. The report goes on to say *"if it is desired to retain the trees then either a new wall will need to be constructed a distance to the west away from the boundary or an embankment formed on the neighbors side of the wall"*. The owner of Sea Crest, has clearly stated that they will not entertain the concept of the boundary wall being moved or there being raised beds or banks on their land.

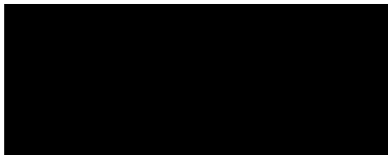
With consideration of all the above facts it is clear that the damaged wall requires reinstatement and that the trees are of high value, in order to retain the trees the retaining wall must be relocated west into the property of Sea Crest. The owner of Sea Crest has stated that they do not want the boundary wall to encroach on their land and they are not allowing a soil bank or further brick work to be formed on their land.

Conclusion

The issues as discussed above prove to only offer one solution that is possible, this will be the removal of the three Holm Oak trees. This will allow the damaged wall to be reinstated, however this loss of trees will be significant and regrettable. Therefore, the submission of a TPO application for works to remove and replace the three trees shall be submitted.

If tree removal is not an option because of the TPO then the only other option is for the encroachment onto the land of Sea Crest, this issue goes beyond the scope of this report as it will be necessary for the local planning authority to ascertain the best course of action and pursue enforcement.

If the local planning authority do not wish to enforce action to save the trees, then the trees will need to be removed in order to address safety issues and to facilitate the reinstatement of the retaining boundary wall. The reinstatement of the wall is a pressing, although not yet urgent matter, with need to address the developing issues as failure of the current retaining wall will likely result in the failure of the trees.



Ben Tidey FdSc

Consultant Arboriculturist

Wednesday, 02 December 2020

Appendix.

Appendix 1 Structural Engineers Report

Dear Denise and Edward

With reference to my visit to Malin House last week I have now had an opportunity to consider further the boundary wall problem and associated Holm Oaks situated on the west boundary. I comment as follows.

The ground within the back garden of Malin House slopes up about a metre or so to the west boundary. Edward's photographs in the e-mail string below provide a record of the wall to the neighbour's side but I do attach some of my own photographs which show the proximity of the oaks to the retaining wall separating the two properties. Quite how this rather strange situation of garden levels first occurred is a mystery to me but Denise was going to look back to possible historic records to see if there was anything which could shed light on the matter. Whatever the outcome of this it would appear that the oaks were planted in ground at the level of the top of embankment. The boundary wall has been built as a retaining wall as is evidenced by the presence of drainage weep holes at the base of the wall. There is nothing to suggest that soil has been dug away from the wall on its west side so from this I draw that the present boundary arrangement is of long standing.

The root growth of the oaks has over a long period of time pushed upon the back of the wall so causing the current lack of verticality. This is such that the wall is now at risk of collapse and whilst at the property I did advise that the neighbours should set up an exclusion zone on their side pending resolution. The ownership of the west boundary wall is currently unknown.

If the trees are to remain the physical space now occupied by the their roots now prevents any new boundary retaining wall construction capable of restoring verticality on its west side. Hence if it is desired to retain the trees then either a new wall will need to be constructed a distance to the west away from the boundary or an embankment formed on the neighbours side of the wall. It is I imagine unlikely that the neighbours will happily agree to such a proposition. Failing this and assuming that due permissions can be obtained the trees must be felled and roots ground out. The boundary can then be restored with a new retaining wall or alternatively the ground on the east side lowered such that the levels each side of the boundary are the same. If it is desired to retain the embankment there are many options for a new retaining wall including one of simple block construction of thickness of the order of 225mm set on new foundations say 750mm wide. Such a wall can be faced up to the west side if so desired.

I suggest that the two options are first discussed with neighbours with a view to arriving at the preferred approach. At this stage a design of wall can be determined. It would be useful to have a level survey of the back gardens along the boundary wall at this stage. If the embankment is to be removed then all that would be required is a boundary wall or fence.

I trust the above is clear. Please come back to me if you have any queries.

Kind regards

Peter

Peter Willmott CEng,FIStructE
Consultant
Archibald Shaw
One Little London
Chichester
West Sussex PO19 1PP

Appendix 2

Arboricultural report

The tree inspection was undertaken on Wednesday 4th November 2020.

There are three trees located on the western aspect of the property located at the boundary with Sea Crest. They are situated atop of a raised mound that slopes up within the garden of Malin House (see picture 1) and on the boundary with the neighbouring property is supported by a retaining wall with a height difference of circa 1m (see picture 2). The tree location and reference numbers can be found in the tree location plan (see appendix 3 Tree Location Plan 1.)

T1 – Holm Oak *Quercus ilex*. Height 10m, DBH 880;580, Crown spread (m) N10, E8, S3, W7, twin stem tree of mature age with good form, good physical condition and good physiological condition.

T2 – Holm Oak *Quercus ilex*. Height 10m, DBH 750, Crown spread (m) N6, E7, S3, W6, single stem tree of mature age with good form, good physical condition and good physiological condition.

T3 – Holm Oak *Quercus ilex*. Height 10m, DBH 830, Crown spread (m) N2, E5, S5, W5, single stem tree of mature age with good form, good physical condition and good physiological condition.

The trees form a focal point to the west of the garden on Malin House, the trees are located to the top of a raised bank and on the boundary with the neighbouring property of Sea Crest. The trees are visible from the public spaces of the beech and The Close (road), this means the trees offer amenity to these places.

The raised bank has a retaining wall on the boundary side, this wall is the responsibility of Mailin House. The wall is of flint and brick construction that traverses the length of the garden, the wall in the areas close to the trees has been pushed out from direct tree root pressure (see picture 3) this movement off the wall has created space at the higher ground level for roots to develop, the trees have grown large roots that would be considered as primary buttress, the roots occupy this space and being in contact with the wall (see pictures 4 & 5) meaning that reinstatement of the wall in the same location is not possible. The trees are located in an exposed setting on the shoreline, this frequently gets strong wind and heavy rain, this fact added to the fact that the trees retain there leaves year round means that the trees need to resist large amounts of stress, should there be a major change in the soil stability, such as from the failure of the retaining wall. With rain and tree movement from wind it is likely that trees will fail. Therefore, if the retaining wall shall completely fall I will advise the tree owner to apply for a 5 day notice to remove the trees.

With the removal of the wall there will likely be soil disturbance that will affect the trees stability, so care should be taken to minimise soil movement and bank collapse. A working method should be found to insure tree stability during demolition and construction.

The best course of action would be to reinstate a suitable retaining wall located circa 0.5m west of the current wall, this retaining wall shall be capable of resisting the soil pressure and pressures applied by the trees. This shall be designed by the project structural engineer.

Should a suitable engineering solution be found it may be required to prune the tree crowns to offer balance to any root loss, this will also reduce loading to the soil and provide an opportunity for the tree to react to the potential soil change, this works would require an application for works unless it is undertaken under a planning condition for the wall reinstatement.



Picture 1. Overview of tree looking west from Malin House. Tree located atop of raised bank.



Picture 2. Overview of tree looking east from Sea Crest. Tree located atop of raised bank supported by a retaining wall



Picture 3. Retaining wall in proximity to T1-T3 with significant lean and cracking



Picture 4. T1 roots in concrete with wall pillar.



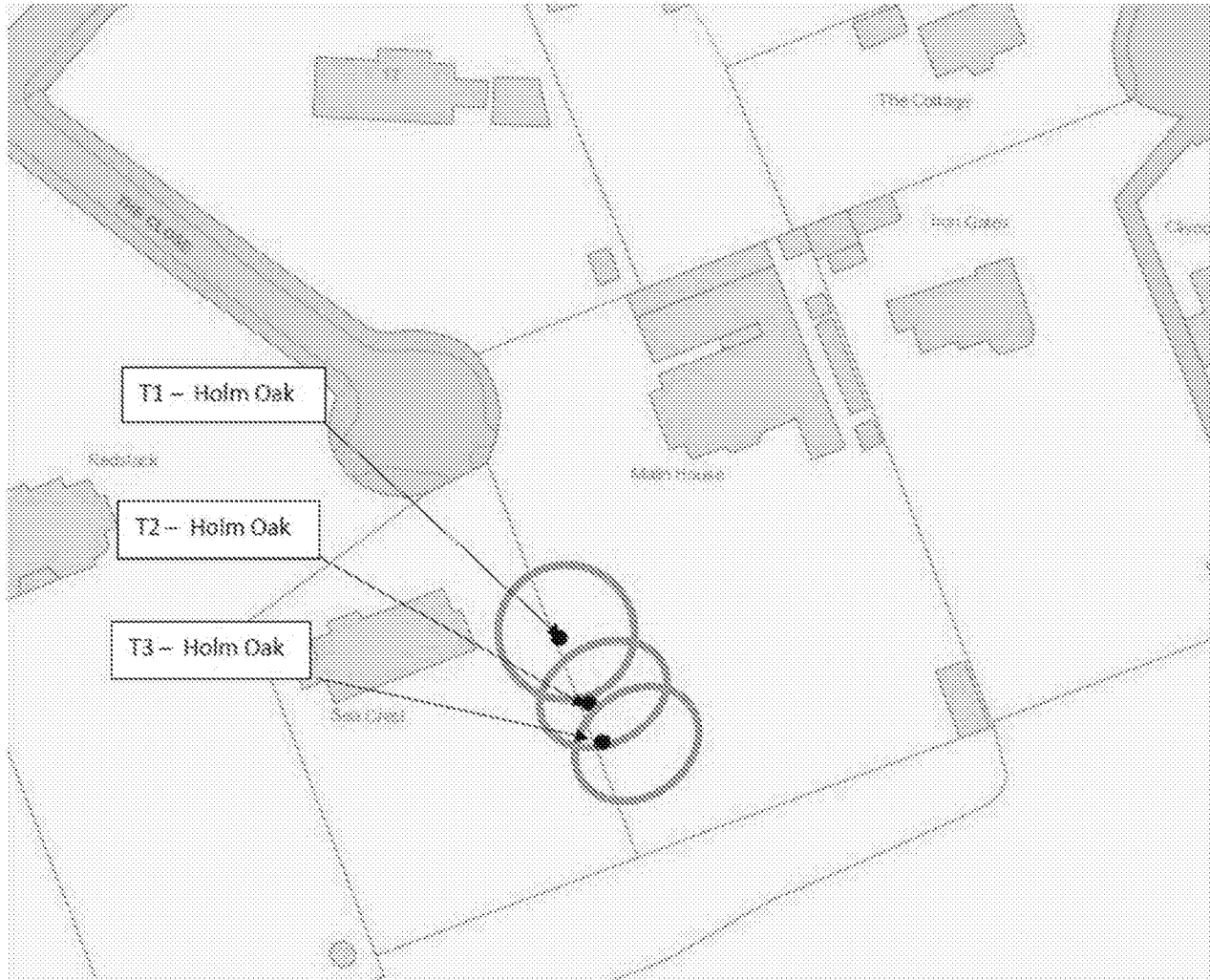
Picture 5. T3 roots in concrete with wall pillar.

Appendix 3

Tree Location Plan – Plan 1

Mailin House
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Tree location plan



End of Report