OAKWOOD
TREE CONSULTANTS

TREE INSPECTION REPORT

Client: Mr and Mrs M Jones

Location: 31 Ferringham Lane, Ferring. BN12 5NB

Date of inspection: 20 July 2023

Inspector: N R Beardmore F.Arbor.A

Our reference: TIR/2306/44

Instructions received:

I am instructed by Mr and Mrs M Jones to carry out an inspection of two Holm oak trees growing within the curtilage of their property at 31 Ferringham Lane, Ferring and report their condition. I am further required to make recommendations regarding the future management of the trees taking account of any specific defects that are noted during the inspection.

The request for an inspection was prompted by concerns for the safety of the trees due to the presence of cavities in their lower stems and the possible risk to people and property.

I understand that both trees are subject to a Tree Preservation Order (TPO) therefore, in most cases where works are proposed, they will be subject to control by the local planning authority.

Tree location:

The trees are located in the roadside verge that forms part of the land attached to the property. Both trees are located at the edge of vehicle crossovers that connect the property to the public highway.

For the purpose of this report, the trees have been numbered T1, located immediately south of the northern crossover, and T2, which is located at the northern edge of the south crossover. Their positions are indicated on the aerial view of the site below.



Aerial view dated
April 2022
(Google Earth)

Method of Inspection

A visual assessment of the tree was carried out from ground level with the aid of binoculars. The inspection followed the principles of the 'Visual Tree Assessment' method expounded by Mattheck and Breloer (The Body Language of Trees, DoE booklet Research for Amenity Trees No. 4, 1994).

The lower stem of the tree was tapped with a plastic-headed hammer to check for indications of internal decay. The differing sounds made during this type of assessment can often reveal areas of hollowing, dead bark and other defects.

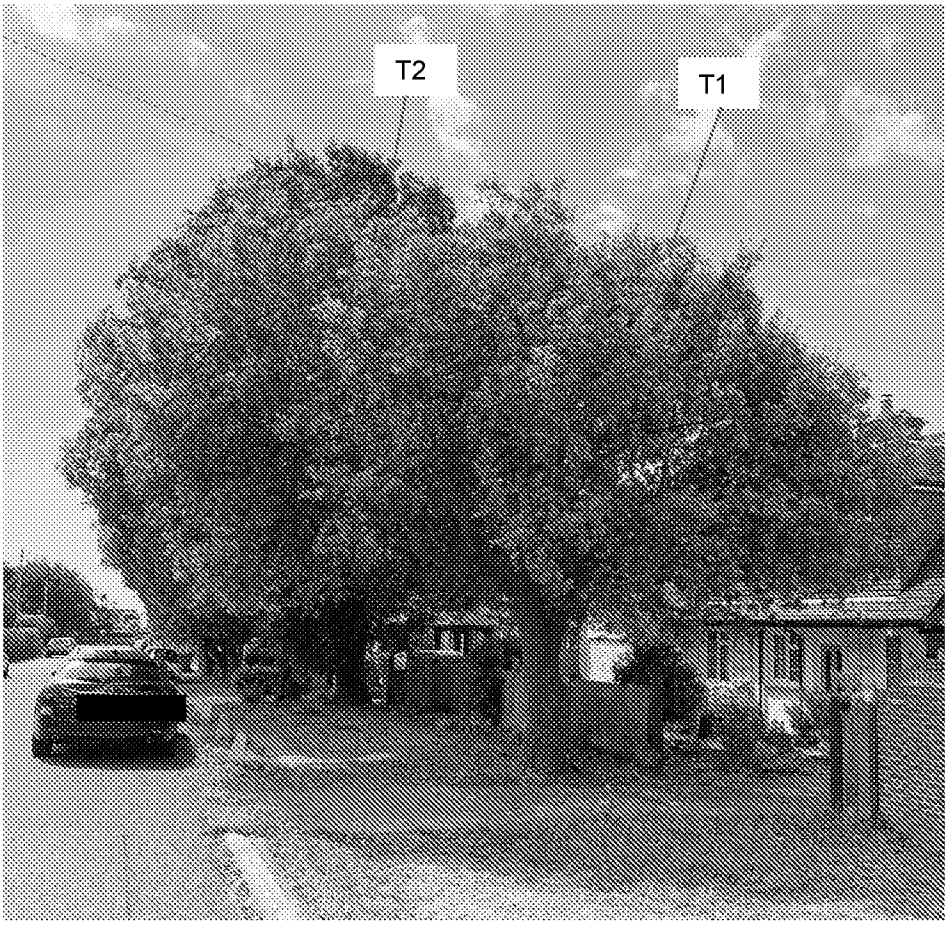
In assessing the potential risks posed by defective trees, recommendations for appropriate action are made in consideration of the guidance provided in '*Common Sense Risk Management of Trees)'* produced by the National Tree Safety Group (published by The Forestry Commission, 2011).

General description:

Dimensions:

No.	Species	No of stems	Stem Dia.* (cm)	Height (m)	Crown radii (m) N	E	S	W
T1	**Holm Oak**	1	53	8.5	4.5	5.8	5.5	5.5
T2	**Holm Oak**	1	72	14	6.2	6.6	5.5	4.7

*Measured at 1.50m above ground level



View of tree from the north (note: other trees behind T2 not inspected)

Both trees have been subject to significant crown reduction works in the past. In the case of T1 there are multiple previous pruning wounds at a height of 3 metres and more recent pruning wounds at approximately 7m. T2 has previously been reduced to 7.5m with a later reduction to 8.5m and most recently to a height between 10 and 11 metres. This pruning has resulted in both trees having relatively dense, broad crowns with low ground clearance all round. Crown vitality is normal in both T1 and T2.

There is a significant stem wound at the base of T1 on the north side. The wound is 60cm wide at ground level and tapers up to a point at 50cm above ground. The exposed tissues are degraded but solid. There is a small concavity at 1m on the south-west side where a branch has died out many years ago, this is not currently of concern. The stem leans 16.5 degrees to the south (measured at 1.5m).

Apart from the obvious stem wound, tapping the stem with a nylon headed mallet indicated no significant areas of degraded tissues in the remaining buttresses.



Basal stem wound on T1.
(note: number shows position where Resistograph microdrill was used)

T2 has a 50cm x 30cm old tear out wound on the south-west side of its stem between 1.2 and 1.7m where a significant limb has failed in the past. Fruiting bodies (brackets) of the decay fungus *Ganoderma australe* are present within the cavity. Additional fruiting bodies are present on the east, south-west and north west sides of the stem at ground level. The stem is more or less upright.

There are multiple old pruning wounds throughout the crown resulting from the previous crown reduction works there are no indications of significant decay. The crown is slightly asymmetric, being biased to the north and east, this could be due, at least in part, to earlier pruning works to reduce the crown on the west side to provide greater clearance from the house.



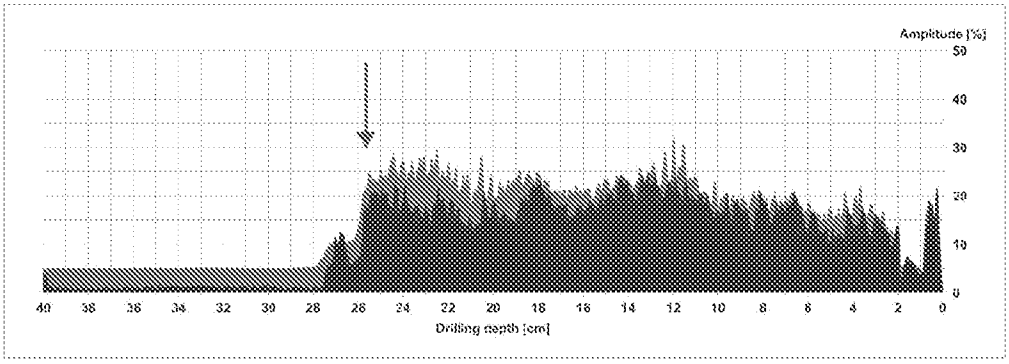
Stem cavity on T2 with close up of fungal fruiting bodies on right

The crown of the tree is asymmetric and is biased to the north-east. Asymmetry or imbalances in crown form is quite common in most tree species for various reasons and, on its own, is not necessarily problematic or an indication of instability. The lower stem of the holm oak has a lean of 14°, also to the north-east, which exacerbates the asymmetry in the crown.

Further Assessment:

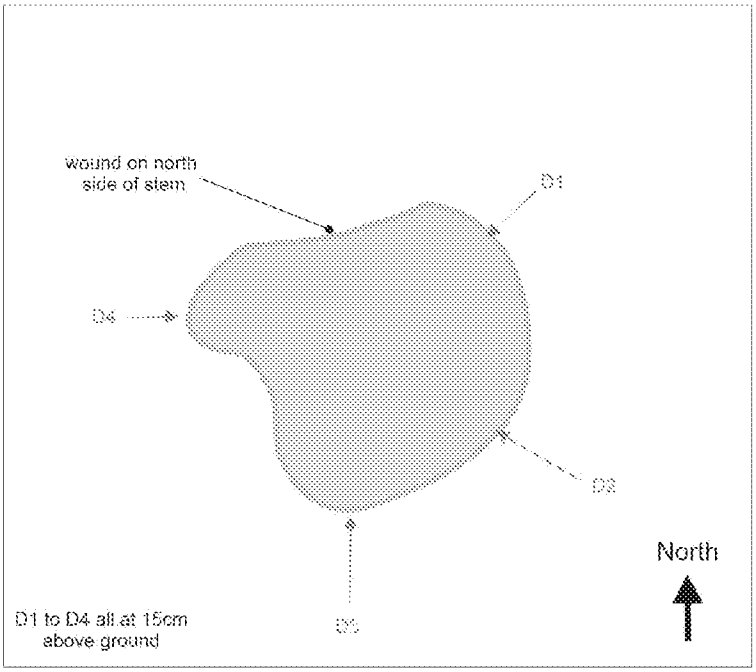
To understand more about the extent of decay, and the remainimg sound wood, the trees were further assessed using a Resistograph PD400 decay detecting drill. The Resistograph measures the resistance to the progress of a micro drill as it passes through the wood to a depth of 40cm. The measurement, based on the electrical power consumption of the device, is converted into digital data that can be displayed in the form of a graph that shows the drill trace. Significant drops in drilling resistance are indicative of decay.

The use of the Resistograph in different places around the stem can assist in identifying any areas of decayed tissues in the stem and, if present, their significance in relation to remaining sound wood and the structural integrity of the tree. In the example below decay is indicated at a drilling depth of 26cm. Note the difference between the resistance to forward motion (blue) and drilling resistance (green). In some instances, dense wood can mask drops in drilling resistance because of the shaft dragging in sound wood. This version of the Resistograph makes such decay visible as resistance to forward motion will drop even if torsional resistance does not.

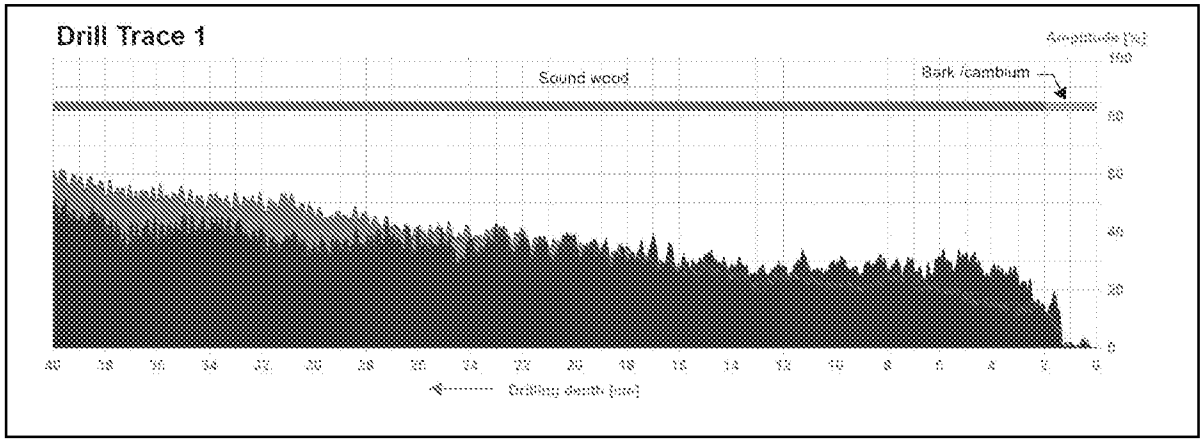


Tree T1

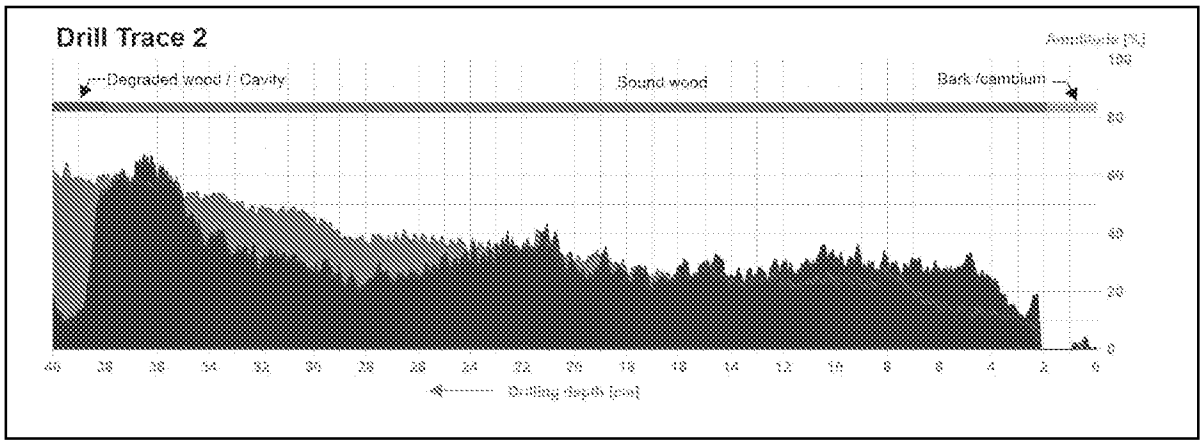
The Resistograph was used to drill into root buttresses in four places around the stem as indicated in the diagram below. All drillings were made at a height of 15cm above ground level, at this height the stem diameter is 71cm.

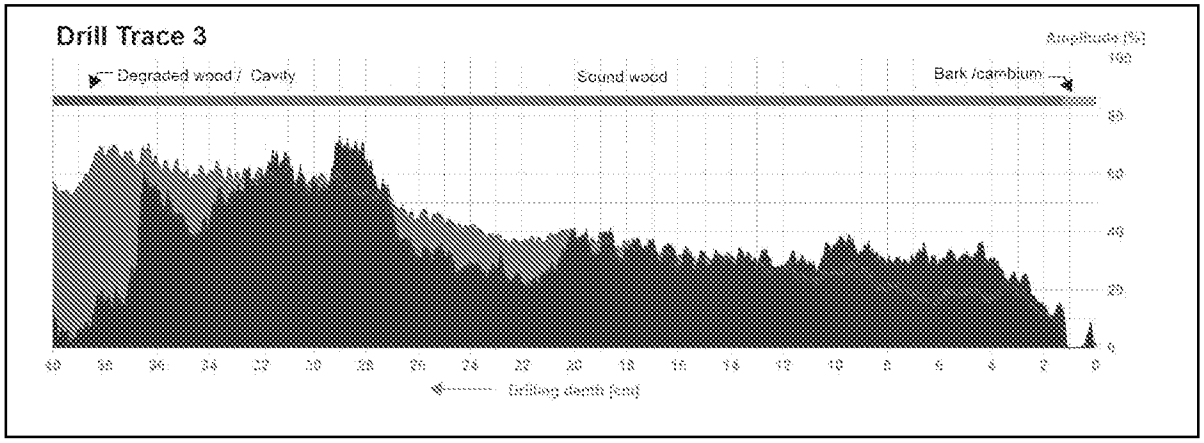


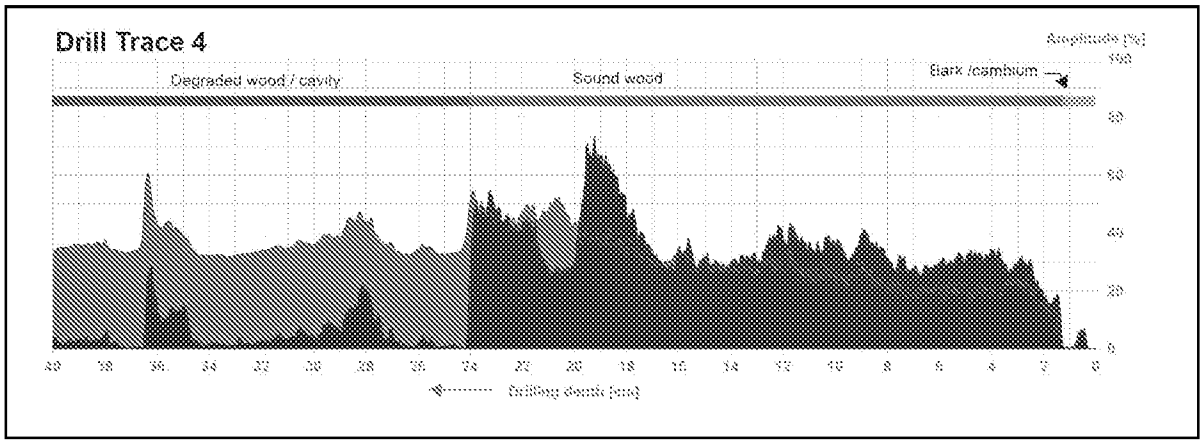
The resultant drill traces are as follows:



Note: the green shading indicates the drag on the shaft of the drill caused by the density of the wood which continued even through the drill had entered the cavity.



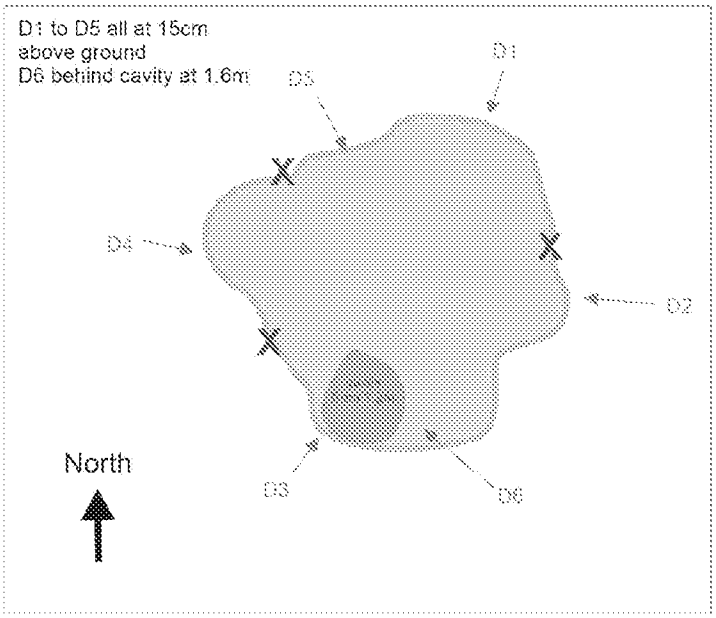




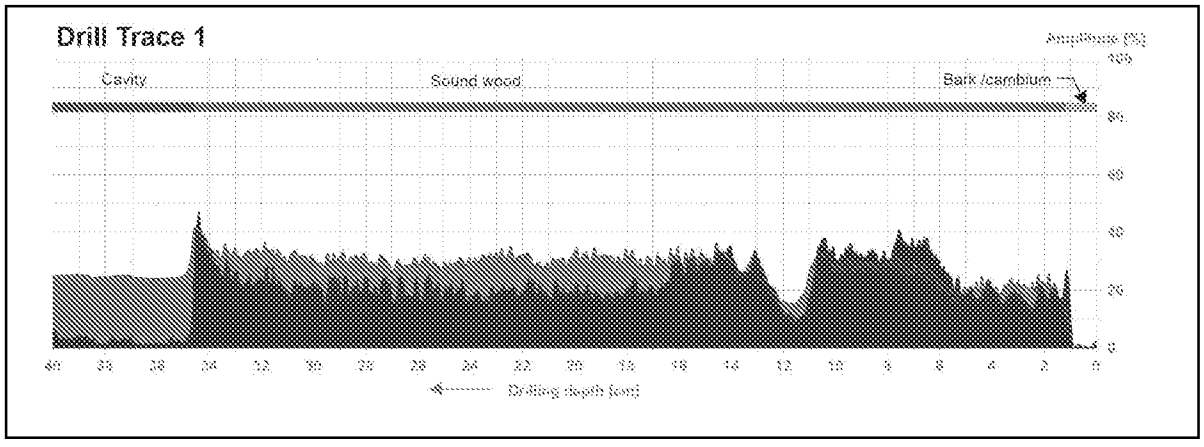
Unsurprisingly, the drill traces revealed areas of decay associated with the pruning wound on the north side of the stem, particularly in the case of drill trace 4 into the buttress immediately adjacent to it. It was however encouraging that no decay is indicated in drill trace 1 on the north-east side of the wound. Whilst some degradation of stem tissues appears towards the full depth of drill traces 2 and 3 there is adequate depth of sound wood to provide support.

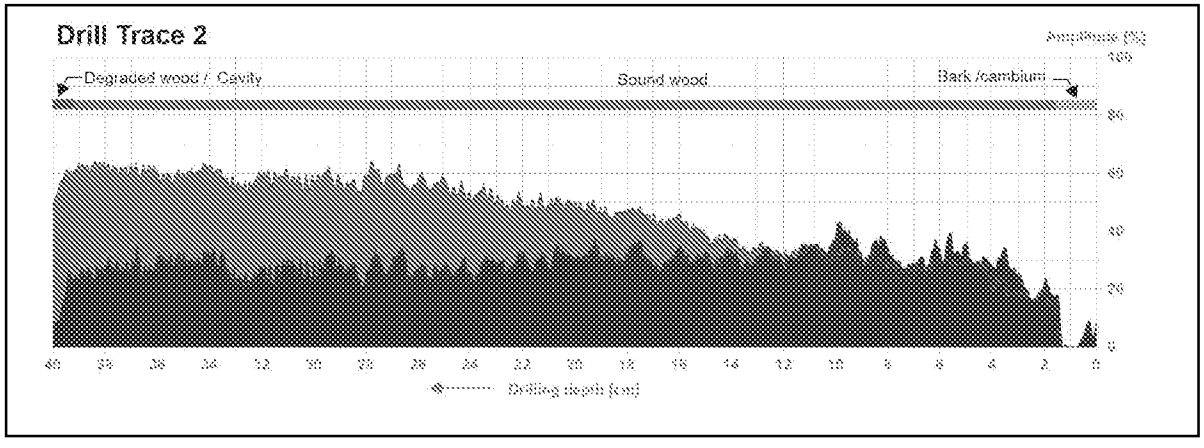
Tree T2

The Resistograph was used to drill into root buttresses in five places around the stem as indicated in the diagram below. All drillings were made at a height of 15cm above ground level, at this height the stem diameter is 88cm. A further drilling (DT 6) was made through the back of the cavity at a height of 1.6m

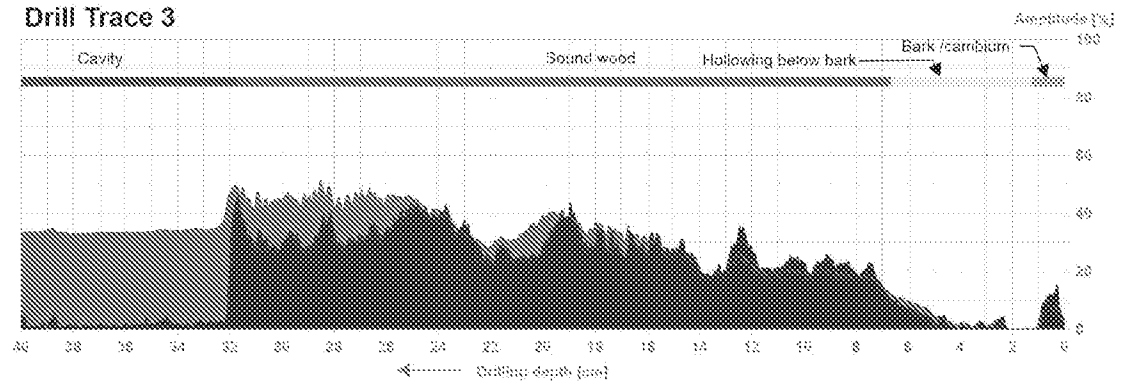


Red crosses indicate the positions of fungal fruiting bodies at ground level

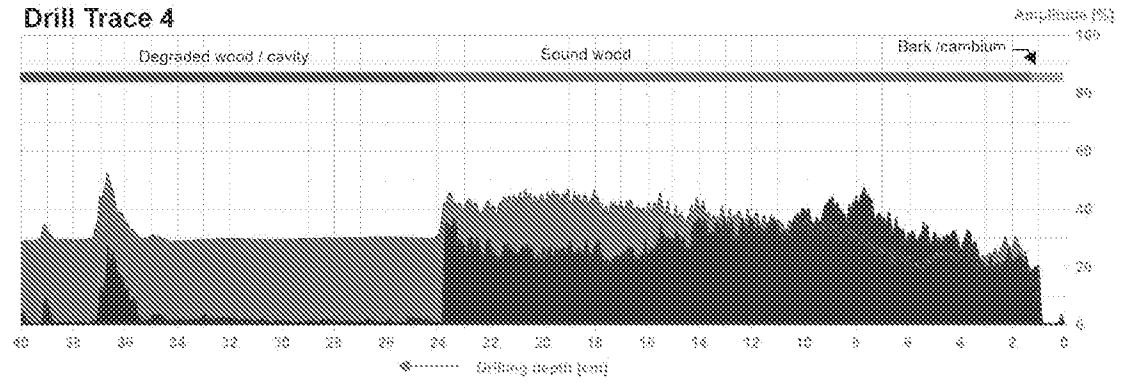




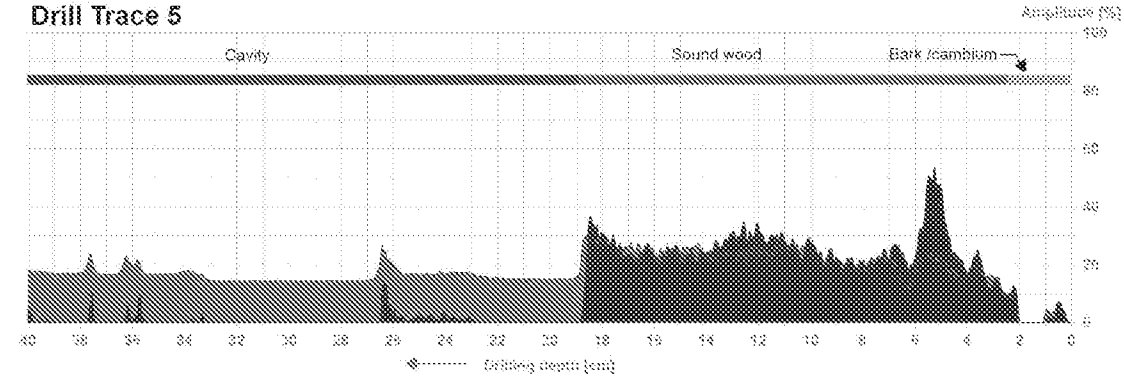
Drill Trace 3



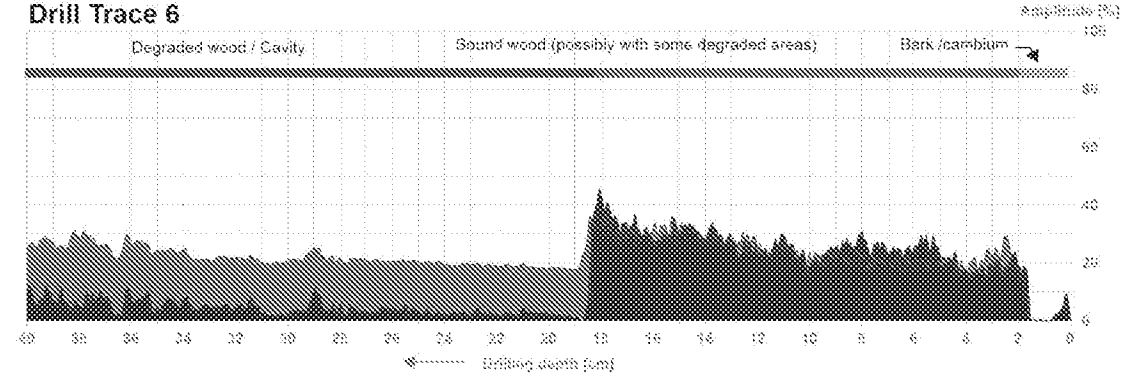
Drill Trace 4



Drill Trace 5



Drill Trace 6



The results of the drillings indicate that there is quite extensive decay in the west side of the lower stem and extending round to the north (drill traces 3, 4 and 5 and, to a lesser extent, drill trace 1). The condition of the stem is better on the east side and south sides of the stem despite the presence of a fungal fruiting body adjacent to drill trace 2. The sharp drop off in resistance in drill trace 6 indicated that the decay associated with the cavity at 1.6m is quite well contained.

Conclusions:

I have considered the likely effects of the stem decay on the structural integrity of the trees and whilst in both cases there is a reasonable amount of remaining sound wood, the defects are significant and there is an increased risk of failure.

Bearing in mind the location of the trees, in a relatively high use area and the exposure of tree 2 in particular to on-shore winds, I consider that works to reduce the size of their canopies would be appropriate. The physiological condition of both trees is good with normal vitality. They should tolerate a modest reduction without significant impact on their health and without materially diminishing their appearance.

It is likely that the condition of the trees will necessitate an increased level of maintenance in the future, possibly involving more extensive crown reductions in the event that decay progresses.

Recommendations:

I recommend the following works:

Tree T1 Reduce height by approximately 1 to 1.5m and reduce lateral spread on the east south and west sides by 1.5m.
Crown lift to clear 4.5m over the edge of the highway and to 3m elsewhere

Tree T2 Reduce crown all round by approximately 2 to 2.5m to just above / outside most recent previous reduction points.
Crown lift to clear 3m all round

Care should be taken to avoid making any pruning wounds greater than 5cm in diameter.

I also recommend that the condition of the trees is re-assessed in no more than three years.

As the trees are subject to a Tree Preservation Order it is will be necessary to obtain the consent of the local planning authority prior to the commencement of works.

All works should be carried out in accordance with the principles set out in British Standard 3998:2010 'Tree work – Recommendations' and by a suitably qualified and insured tree contractor.

Signed: [redacted] N R Beardmore. F.Arbor.A

Date: 8 September 2023