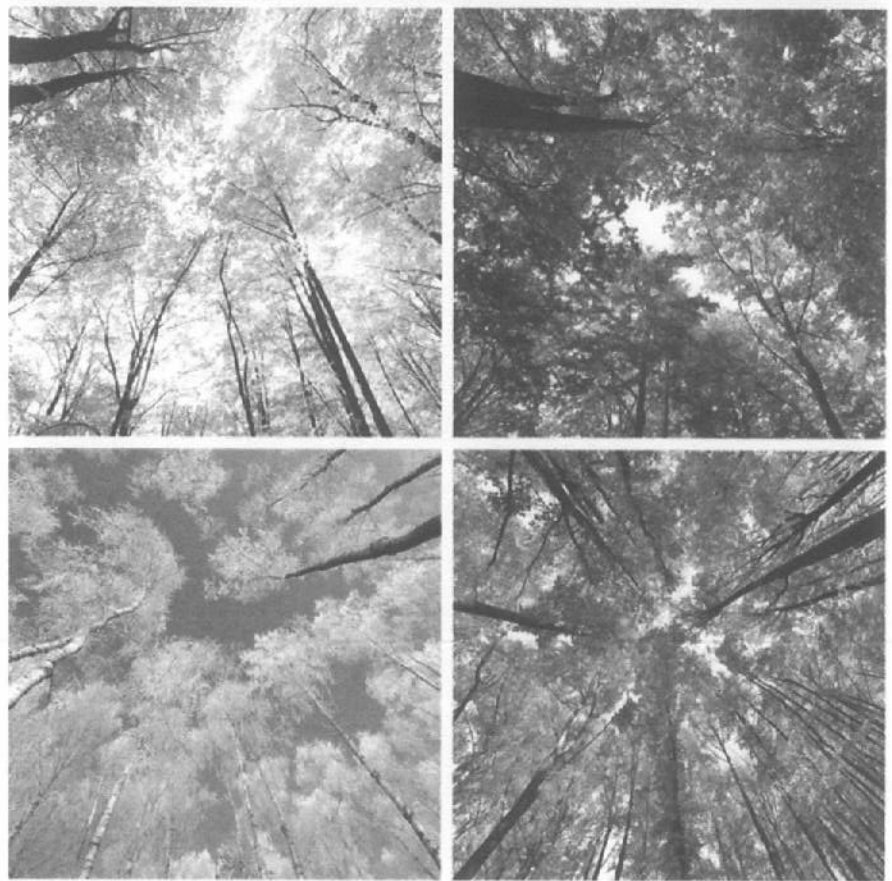




# Gale Tree Consultancy

Tree Condition Report

12 North Court, BN6 8JS

August 2025

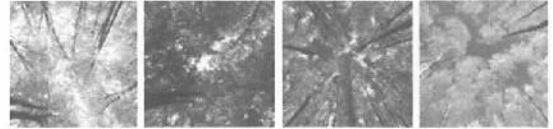
Ref: TCR/677/25

# Gale Tree Consultancy

Tel: 01798 875731 | Email: [office@galetreeconsultancy.co.uk](mailto:office@galetreeconsultancy.co.uk) | Web: [galetreeconsultancy.co.uk](http://galetreeconsultancy.co.uk)

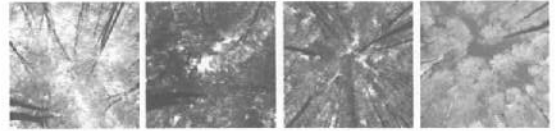
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Gale Tree Consultancy is a trading name of Andrew Gale Tree Surgery Ltd.  
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## Executive Summary

- Findings show an increase in the area of reduced sonic velocity, and as such decay, compared to the 2019 assessment, however the extent does not warrant any further action
- Reassess in three years from the report's date
- The cavities recorded on the main stem at c.3.8m and 4.8m require further investigation due to audible changes in tone when assessed with a nylon headed mallet
- The cavity at c.7m has been described as extending down the stem to a depth of c.4m and as such should also be part of the aerial assessment
- Internal tree inspection should be made available for this assessment which should take place within six months of the report's date



## 1.0 Introduction

### 1.1 Client and Address

- Mr Linke, 12 North Court, Hassocks, BN6 8JS

### 1.2 Site Address if Different from the Above

- As above

### 1.3 Date of Inspection

- 13<sup>th</sup> August 2025

### 1.4 Name of Inspector

- Andrew Gale *Dip Arb L6 (ABC) MICFor M.Arbor.A*

### 1.5 Our Reference

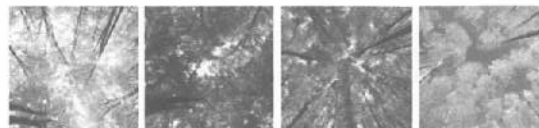
- TCR/677/25

### 1.6 Instructions Received

- I have been instructed by Mr Linke to undertake a ground level internal inspection of a mature tree growing within the grounds of the above address; I am also to inspect a cavity on the main stem
- I am to provide my findings in the form of a report detailing any remedial work that may be necessary

## 2.0 Scope of the Report

- Trees are dynamic living organisms, and their health and condition can be subject to rapid changes, depending upon a number of internal and external factors
- The conclusions and recommendations contained within this report are based on information gained at the time of inspection and are subject to the limitations of the specialist nature of this survey
- Therefore, the likelihood of failure is considered for three years from the reports date based on the information gained on the day of the report and on the assumption that any recommended work will be undertaken in the time frame specified
- It should be noted that even completely sound, healthy trees, can fail given sufficiently severe weather conditions therefore this report is not valid in adverse or unpredictable weather conditions or for any failure due to Force Majeure
- The survey carried out relates to specific defects identified by others in the subject tree and does not constitute a full tree inspection
- The site has not been checked for any statutory constraints
- The trees were not assessed for wildlife which would include birds or bats



### 3.0 Results of Inspection

#### 3.1 Tree Species and Dimensions

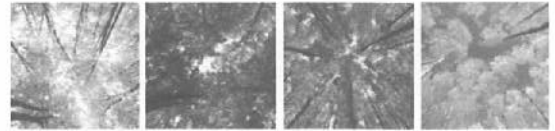
| No. | Species         | Scientific Name      | H<br>(m) | Crown Spread (m) |     |     |     | Age | Phys.<br>Con. |
|-----|-----------------|----------------------|----------|------------------|-----|-----|-----|-----|---------------|
|     |                 |                      |          | N                | E   | S   | W   |     |               |
| T1  | Pedunculate oak | <i>Quercus robur</i> |          | 8.0              | 7.0 | 8.0 | 7.5 | M   | Good          |

#### 3.2 General Description

- The tree is located within the rear garden of the property and sits c.55m above sea level<sup>1</sup> where it is surrounded by residential properties
- The wider landscape encompasses Hassocks to the north, east and south with open farmland to the west
- The tree is positioned on a raised border, produced when the ground level was lowered on the west side of the tree
- On the west of the stem at ground level is an open wound measuring c.1.1m in height and c.40cm in width; a 1m long steel probe extended into the rooting system to its full length, roughly towards the north side of the stem
- Wound wood<sup>2</sup> is developing around the outer edge of the cavity, and the exposed wood is becoming friable in nature; an audible change in tone was heard on the north side of the cavity when assessed with a nylon headed sounding mallet – please see Appendix 1 Method of Inspection
- Small back exudates were noted on the north side of the stem close to ground level, this area too emitted a slight change in tone when assessed with the nylon headed mallet
- At c.3m from the main stem, a primary stem section heads in a southerly direction; the union looks good
- On the west side of the main stem at c.3.8m is an open cavity measuring 24x10x40cm (HxWxD), where the stem had a diameter of c.109cm. The steel probe extended down the stem to a depth of 20cm and up the stem to a height of cc.80cm
- A further smaller cavity was recorded on the south side of the stem at c.4.8m, with a larger cavity on the east side at c.7m

<sup>1</sup> [www.calcmaps.com](http://www.calcmaps.com)

<sup>2</sup> Wound wood – occluding tissues forming around a wound or area of stress, which helps compensate for any loss of strength in that region



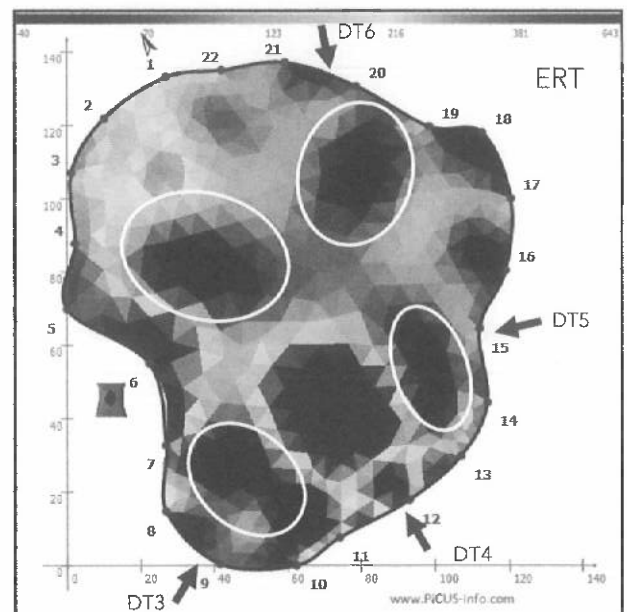
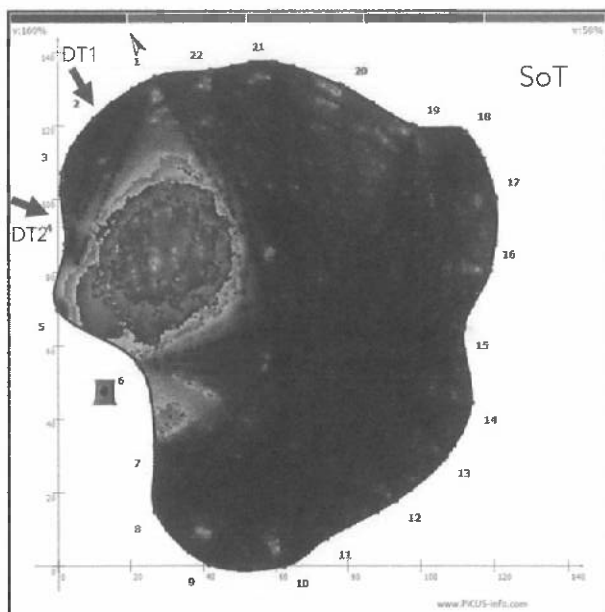
### 3.3 Decay Evaluation

- To confirm the extent of any decay on the lower stem, the PiCUS 3 Sonic Tomography (SoT) unit and the PiCUS 2 Electrical Resistance Tomography (ERT) unit were used c.10cm above ground level (north side of the stem) with 22 measuring points (MP). MP 1 was placed at north for reference purposes – please see below:

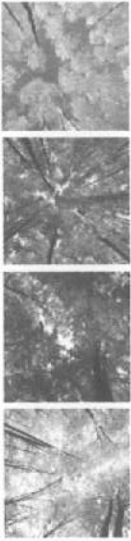
Height of assessment c.10cm above ground level with MP1 referencing north



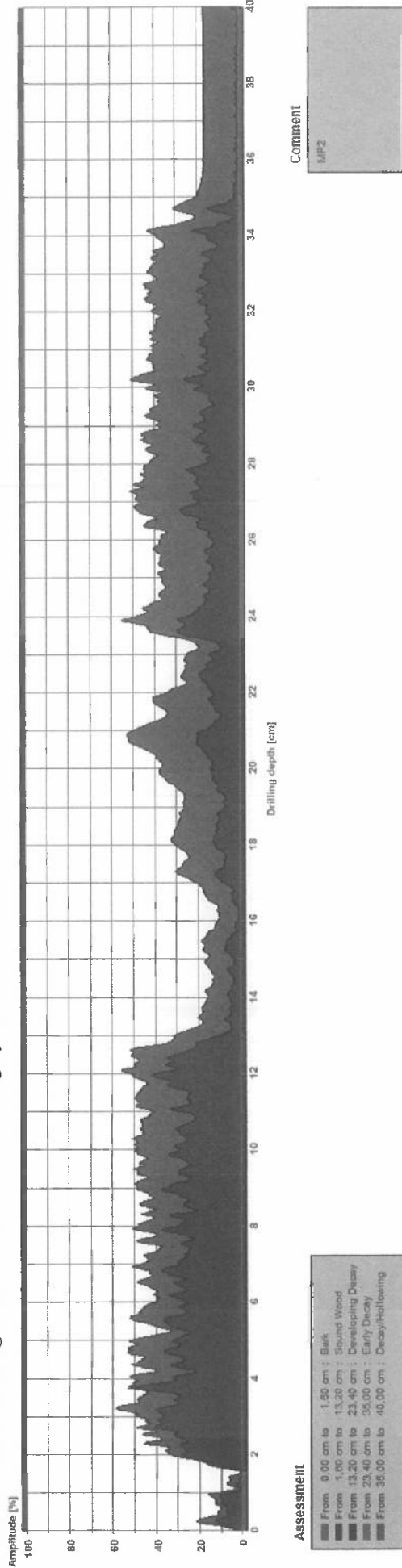
- The SoT assessment indicates an area of high sonic velocity, and as such sound wood, across much of the assessed plane, as shown by the brown colour present
- The area of blue indicates low sonic velocity and as such decay/hollowing



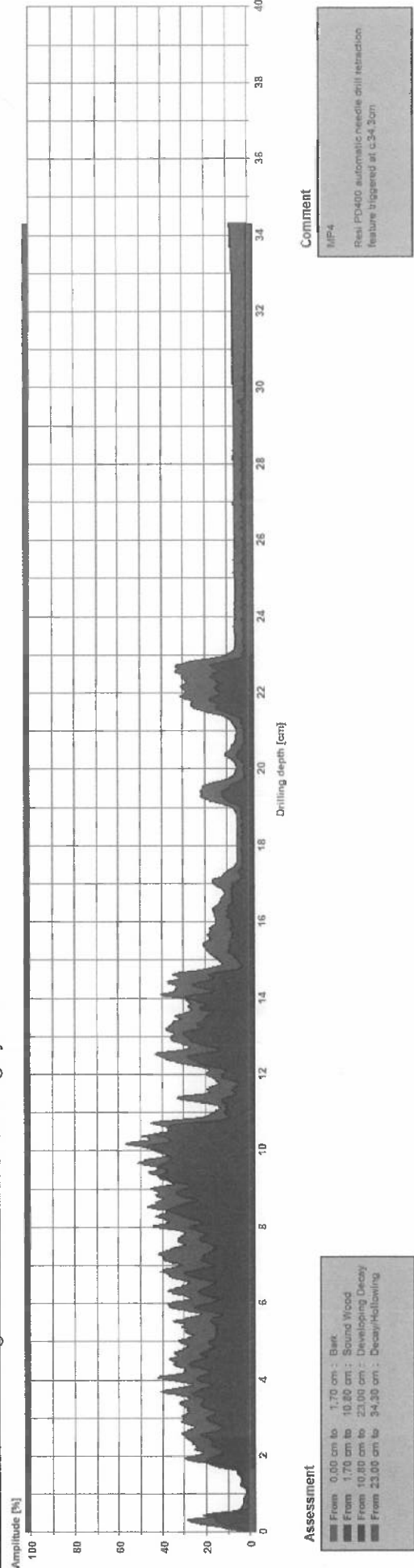
- The ERT assessment shows an area of increased electrical conductivity, and as such a decrease in electrical resistance, suggesting an area of decay is present – circled white to aid identification
- The red area between MP5 and MP7 shows an area of increased electrical resistance and a decrease in conductivity, and as such an area of dry wood
- To confirm the tomograms, the Resi PD400 was used in six locations, angled into the rooting system at the level of assessment – please see red arrows on the tomograms above and the drill traces overleaf:

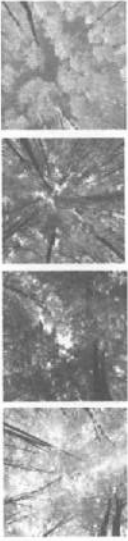


Drill Trace 1 - MP2 angled at -25° into the rooting system

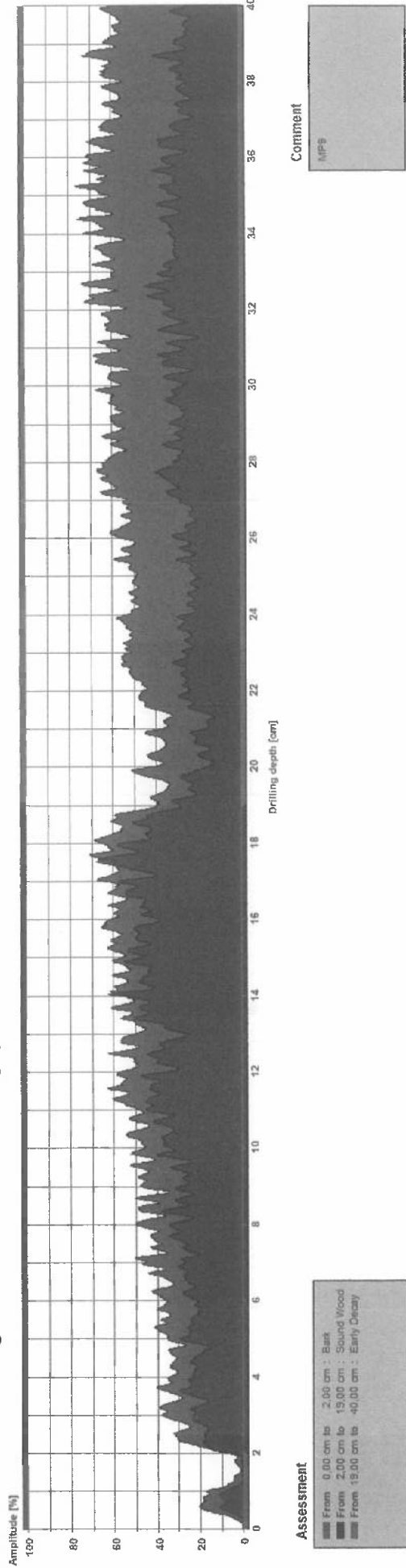


Drill Trace 2 - MP4 angled at -25° into the rooting system

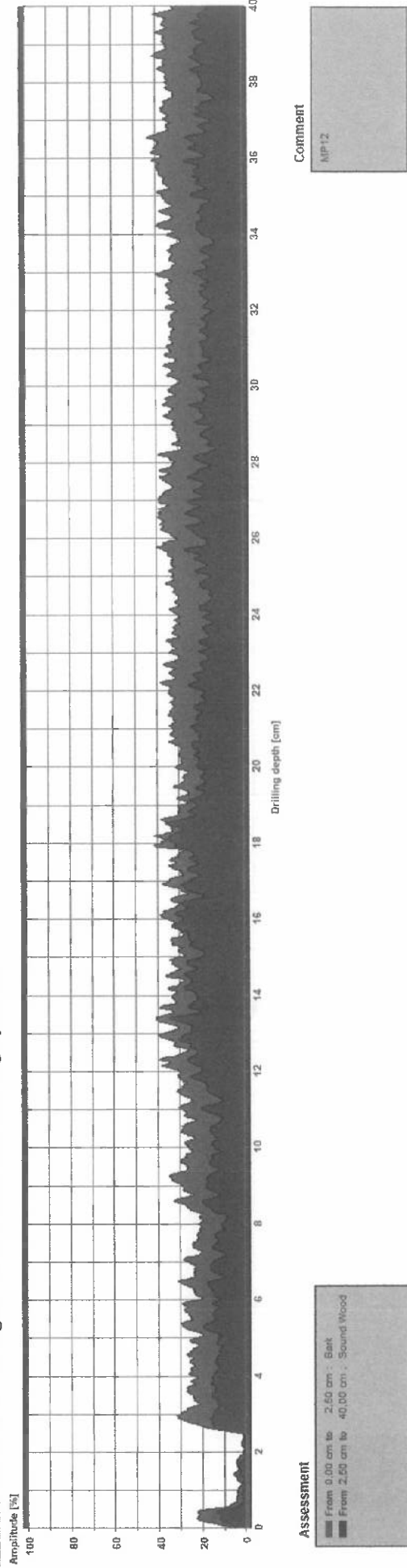


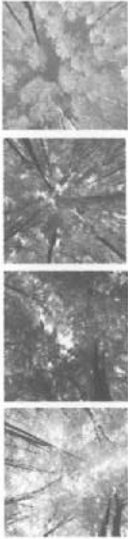


Drill Trace 3 - MP9 angled at -25° into the rooting system

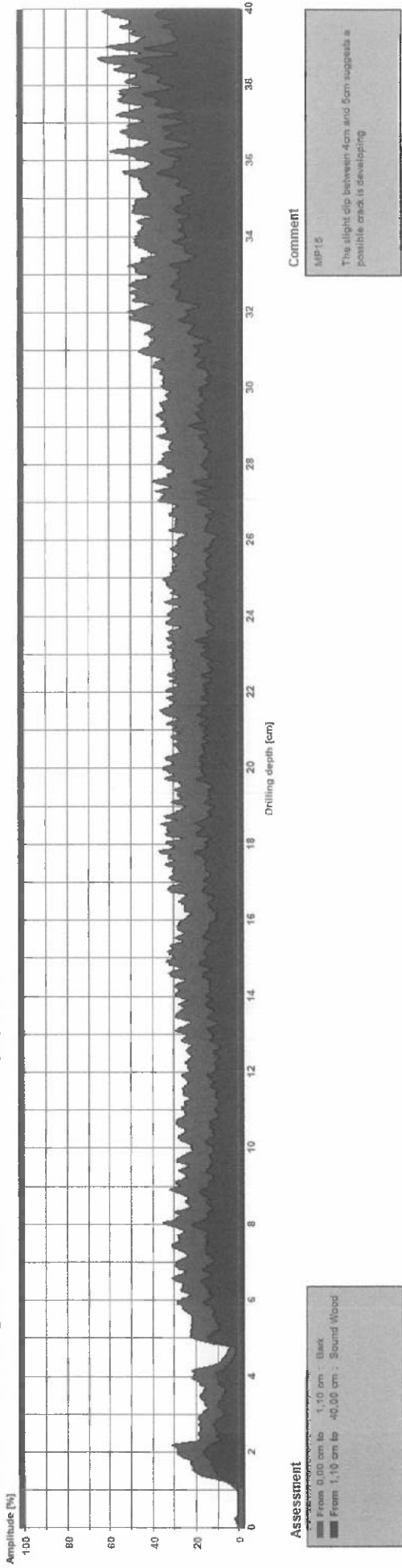


Drill Trace 4 - MP12 angled at -25° into the rooting system

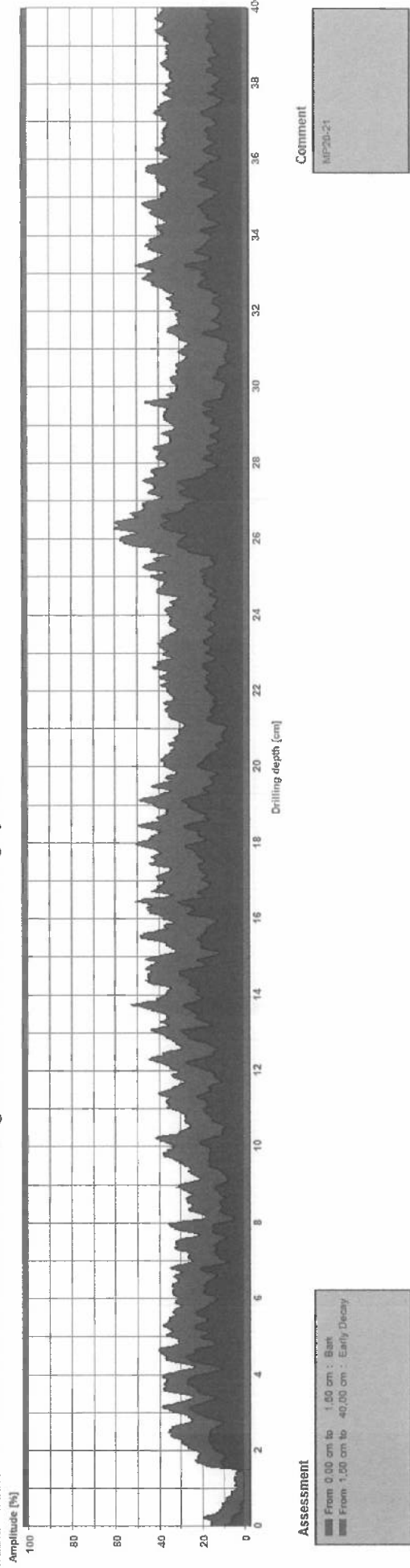


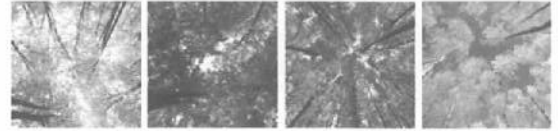


Drill Trace 5 – MP15 angled at -20° into the rooting system



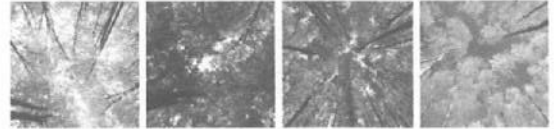
Drill Trace 6 – between MP20 and MP21 angled at -20° into the rooting system





## 4.0 Summary of Results

- The SoT result shows an area of decay and hollowing is forming around the northwest side of the stem as shown by the blue colourations
- This is confirmed by Drill Traces 1 and 2 which both show extensive drops in resistance along their drill lengths
- A typical ERT result for a Pedunculate oak shows a red circle of high electrical resistance encircling an area of blue where a concentration of ions produces a blue colouration
- However, the ERT result for this tree shows a mix of colourations implying different stages of decay may be present
- The blue areas circled with white show areas of early decay where there is an increase in moisture
- This is confirmed by Drill Trace 3 which shows a decrease in resistance from c.19cm suggesting early decay is forming
- The red area between MP5 and MP7 shows the open face of the cavity, which is becoming dry and as such has a high electrical resistance
- The red patch adjacent to MP12 is, in my opinion, part of the red circle that would ordinarily encircle the stem and not an area of decay, yet Drill Trace 4 shows no significant increase in resistance and although it has been classed as sound wood, it could easily be very early decay beginning to manifest itself
- Drill Trace 5 shows a relatively level area of resistance up to c.31cm after which the resistance increases showing sound wood, unlike Drill Trace 6 which shows an area of early decay developing straight after the bark layer
- Despite the increase in the area of low sonic velocity compared to the 2019 result, I do not consider the current extent is likely to adversely affect the tree's structural condition and as such no further work is required
- Reassess in three years from the report's date
- The cavities at c.3.8m and c.4.8m both emit an audible change in tone suggesting possible decay and dysfunction around this area of the stem
- I was also informed by the client that whilst aloft, the arborists who carried out the crown volume reduction noted that the cavity at c.7m extended down the stem to a depth of c.4m
- Based on this I would recommend that this area of the tree undergoes a more comprehensive internal tree inspection so an appraisal of any decay and dysfunction can be made
- This should be undertaken within six months of the report's date



## 5.0 Recommendations

- Implement the aerial internal inspection in the time period specified
- Depending on those findings, reassess in three years of the report's dates
- This time frame should be shortened in the event:
  - The tree's local environment changes significantly
  - Fruiting bodies emerge from anywhere on the tree
  - After extreme weather events such as:
    - Wind gusts in excess of Force 8 on the Beaufort Scale – see Appendix 3
    - After named extreme weather events

This concludes my report.

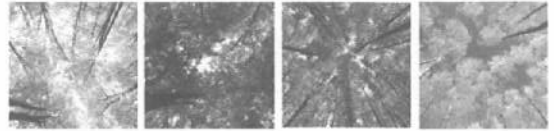
Yours sincerely

Andrew Gale *MICFor Dip Arb L6 (ABC) M.Arbor.A*

 Institute of  
Chartered Foresters  
Registered Consultant

 Arboricultural  
ASSOCIATION  
Professional Member

Date: 22<sup>nd</sup> August 2025



## 6.0 Appendix 1

### Method of Inspection Visual Tree assessment – VTA

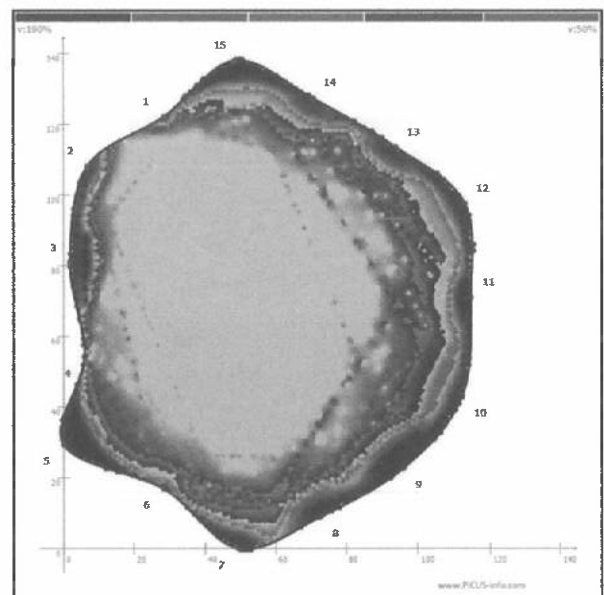
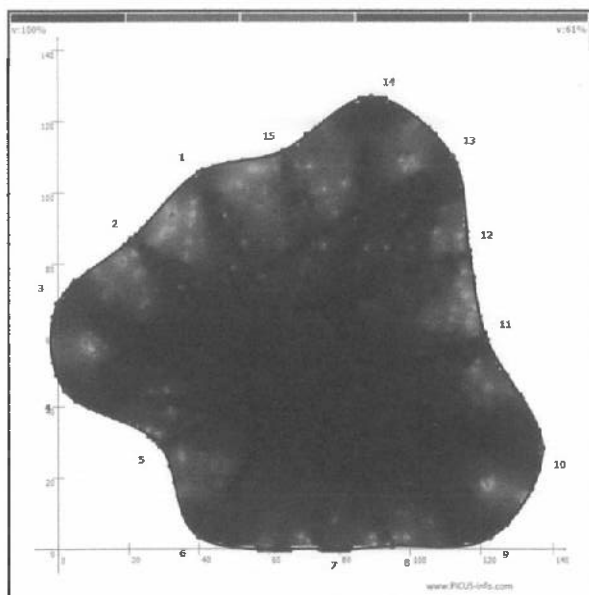
- A nylon headed mallet is used to sound the stem as an initial indication of the presence of decay
- Dull tones indicate areas of lifted and moribund bark, and areas where decay is forming within the main body of the stem
- A thin steel rod is used, where necessary, to assess the depth of any decay in cavities and concavities between buttress roots

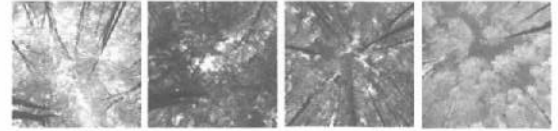
### Internal Tree Inspection

- PiCUS 3 Sonic Tomography (SoT) unit uses the relative velocity of sound waves induced across the stem to produce a colour shift image where dark browns represent wood with higher velocities and as such sound wood
- Lower sound speeds caused by decay or hollowing are represented by lighter colours with blue/white indicating significant decay/hollowing
- A representation of the colour differences between sound wood and decaying wood

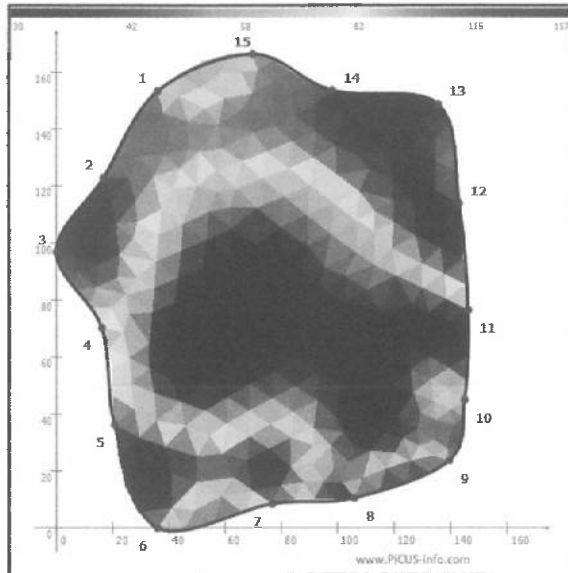
HIGH VELOCITY TO LOW VELOCITY  
Indicating  
SOUND WOOD TO DECAYED AND HOLLOWING WOOD

- On the examples below, the tomogram on the left indicates a sound tree and the tomogram on the right, a tree with significant decay or hollowing:



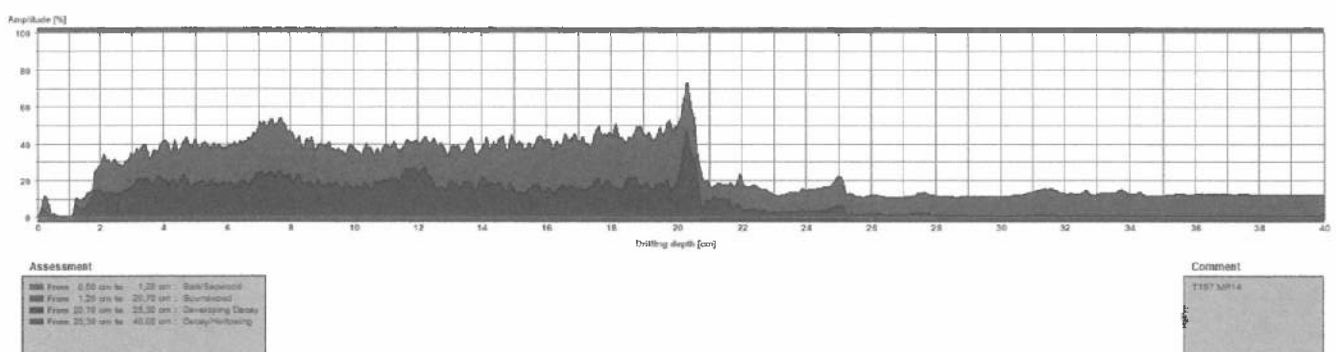


- A further assessment using the PiCUS 2 Electrical Resistance Tomography unit (ERT) can be used

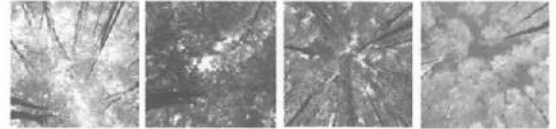


- The PiCUS 2 ERT unit produces an electrical current to assess the condition of the wood within the tree. Changes in the water content, cell composition and chemical elements will change according to the condition of the wood – see to the left
- The blue colouration in the tomogram indicates an area of high conductivity suggesting advancing decay
- The ERT system can test below the assessed plane which helps with the early diagnosis of changes to the wood structure

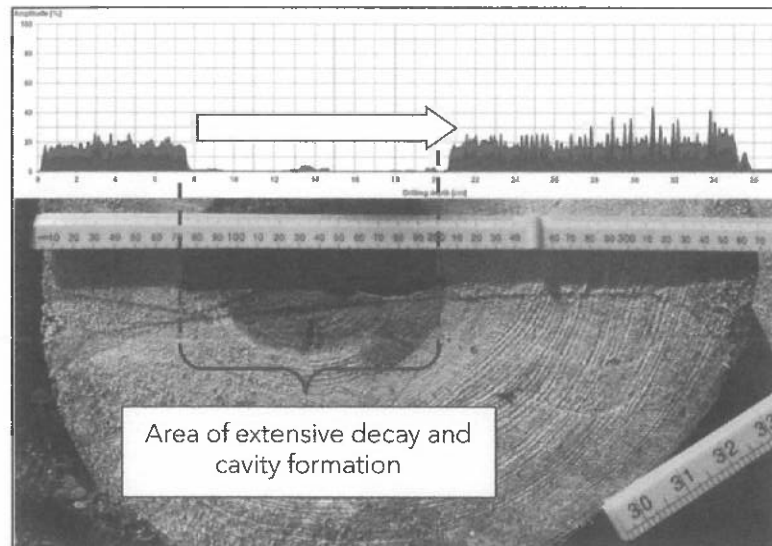
- An IML Resi PD400 microdrill, which measures the resistance of a very fine drill bit to a depth of 400mm, can be used for further confirmation. Significant drops in drilling resistance are indicative of decay or hollowing
- On the example below, sound wood is present to a depth of c.20.7cm before the needle drill enters an area of developing decay; at c.25.3cm the needle drill enters a cavity which extends to the end of the assessment
- Please note, the colours of the Resi Drill Traces have been colour-coded to match those of the PiCUS 3 Sonic Tomography unit

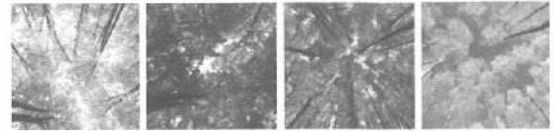


- Historically, Resi drill traces have read from right-to-left due to the configuration of the original machine. However, by using the software available, I have flipped the drill traces to read left-to-right, the more conventional way to read a graph



- On the image below, you can see where the drill entered the area of extensive decay and cavity at c.7.5cm and re-entered the sound wood at c.20.8cm; the drill exited the stem at c.35.4cm

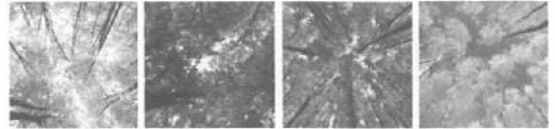




## Appendix 2

### Survey Key

|                         |                                                                      |                                                                                                                                            |
|-------------------------|----------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------|
| Tree No.                | Relating the tree being assessed                                     |                                                                                                                                            |
| Species                 | Common name in English                                               |                                                                                                                                            |
| Scientific name         | The current scientific name will be used                             |                                                                                                                                            |
| Height                  | Measured using a TruPulse digital clinometer and shown in metres (m) |                                                                                                                                            |
| Crown Spread            | Measured using a TruPulse digital clinometer and shown in metres (m) |                                                                                                                                            |
| Age Class               | Young [Y]                                                            | recently planted or established within the last 5 years                                                                                    |
|                         | Semi Mature [SM]                                                     | a well-established youngish tree but far from full maturity                                                                                |
|                         | Early Mature [EM]                                                    | long established nearing its full size but not fully mature                                                                                |
|                         | Mature [M]                                                           | fully mature tree that has met its full size                                                                                               |
|                         | Late Mature [LM]                                                     | a fully mature tree that has passed its peak; may exhibit areas of decline                                                                 |
|                         | Veteran [V]                                                          | a tree with the physical characteristics of an Ancient tree but is not ancient in years compared to other trees of the same species        |
|                         | Ancient [A]                                                          | a tree that has past full maturity and is old or aged in comparison to other trees of the same species                                     |
| Physiological Condition | GOOD                                                                 | No significant physiological problems                                                                                                      |
|                         | FAIR                                                                 | Some physiological problems                                                                                                                |
|                         | POOR                                                                 | Significant physiological problems                                                                                                         |
|                         | MORIBUND                                                             | In a serious and irreversible decline                                                                                                      |
|                         | DEAD                                                                 | Not alive                                                                                                                                  |
| Tree Structure          | Main Stem                                                            | The stem, from ground level up to the point at which it bifurcates                                                                         |
|                         | Primary Stem Section (PSS)                                           | The larger stem sections that emanate from the main stem after bifurcation; form the main crown structure                                  |
|                         | Secondary Stem Section (SSS)                                         | The stem sections that emanate from the primary stem sections that contribute to the inner crown structure                                 |
|                         | Tertiary Stem Section (TSS)                                          | The stem sections that emanate from the secondary stem sections that contribute to the inner and outer crown structure                     |
|                         | Subordinate Branch Structure (SBS)                                   | The smaller diameter branches that help form the inner and outer branch structure; leaf bearing twigs emanate from these to form the crown |



## Appendix 3

### Beaufort Scale

| Beaufort Number | Name            | Knots       | MPH         | Effects Observed on Land                                                                     |
|-----------------|-----------------|-------------|-------------|----------------------------------------------------------------------------------------------|
| 0               | Calm            | Under 1     | Under 1     | Calm, smoke rises vertically                                                                 |
| 1               | Light Air       | 1-3         | 1-3         | Direction of wind is shown by smoke drift but not by wind vanes                              |
| 2               | Light Breeze    | 4-6         | 4-7         | Wind felt on face, leaves rustle, ordinary wind vane moved by wind                           |
| 3               | Gentle Breeze   | 7-10        | 8-12        | Leaves and small twigs in constant motion, wind extends light flag                           |
| 4               | Moderate Breeze | 11-16       | 13-18       | Raises dust and loose paper, small branches are moved                                        |
| 5               | Fresh Breeze    | 17-21       | 19-24       | Small trees in leaf begin to sway, crested wavelets in inland waters                         |
| 6               | Strong Breeze   | 22-27       | 25-31       | Large branches in motion, whistling heard in telegraph wires, umbrellas used with difficulty |
| 7               | Near Gale       | 28-33       | 32-38       | Whole trees in motion, inconvenience felt in walking against the wind                        |
| 8               | Gale            | 34-40       | 39-46       | Breaks twigs off trees, generally impedes progress                                           |
| 9               | Strong Gale     | 41-47       | 47-54       | Slight structural damage occurs - chimney pots, slates removed                               |
| 10              | Storm           | 48-55       | 55-63       | Seldom experienced inland, trees uprooted, considerable structural damage occurs             |
| 11              | Violent Storm   | 56-63       | 64-72       | Very rarely experienced, accompanied by widespread damage                                    |
| 12              | Hurricane       | 64 and over | 73 and over |                                                                                              |