

Tree Surveys

BS5837 – Pre Planning – Mortgage – Risk Management & Prediction

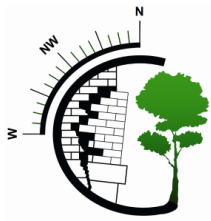
VISUAL TREE ASSESSMENT AND DECAY DETECTION AT EMMBROOK COURT READING



**Prepared for:
Emmbrook Court
South Drive
Lower Earley
Reading
RG6 5TZ**

18 June 2025

Ref: SPH/VTa-25/12.06



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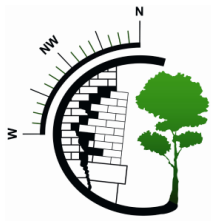
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SUMMARY

We inspected one tree (T) number 479, a mature horse chestnut that was last inspected in July 2024.

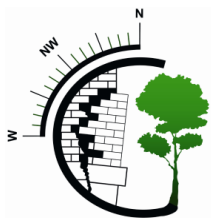
A comprehensive visual inspection supported by decay detection was undertaken.

Isolated pockets of decay and a small cavity were detected during the advanced testing. There is no evidence to indicate any fungal infection, and the decay appears localised and is not considered to be structurally significant at this time.

The tree exhibits symptoms of infection by bleeding canker and horse chestnut leaf minor and is in poor physiological condition.

The main stem has a natural lean of approximately 15 degrees towards the highway (Shinfield Road) and also has an abrupt change of direction at 9 metres leaning approximately 45 degrees to the north.

The tree should be considered medium risk due to the constant use of the target area, poor physiological condition, decay and location relative to the target area. Remedial work is required to reduce the risk associated with the stem cavities and poor physiological condition. The tree must also be monitored for evidence of physiological and structural decline; this will require an annual visual inspection by a suitably qualified arborist and a full visual tree assessment in 3 years from the date of this report.



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1. INTRODUCTION

1.1 Instructions

- 1.1.1 Tree Surveys were instructed by Justine Bowler of Emmbrook Court, South Drive, Reading, RG6 5TZ to conduct a visual tree inspection and decay detection of T479 located within the grounds of Emmbrook Court.
- 1.1.2 We are further instructed to provide a report commenting upon the structural and physiological condition, health and safety of the tree and to produce a schedule identifying works required as a result of our investigations.

1.2 Background Information

- 1.2.1 We have been undertaking tree inspections on this site for at least 20 years with the most recent survey being undertaken in June 2024. It was recommended that the following work “reduce end weighting of limbs adjacent to road”, be undertaken within 3 months.
- 1.2.2 In addition to the site surveys, advanced inspections including decay detection have been undertaken to trees in 2022 and 2023.

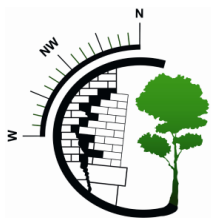
1.3 Scope

- 1.3.1 This report is concerned specifically with the structural characteristics and physiological condition of T479. The primary purpose of this report is to establish the physiological and structural condition of the tree and formulate management proposals in line with industry best practice.
- 1.3.2 The basic visual tree survey process is a simple data collection process; it followed procedures comparable to those prescribed by Lonsdale, 1999¹, Mattheck and Breloer, 1994² and National Tree Safety Group 2011³ gathering visual information on such things as:
- Tree size, age and health
 - Tree species
 - External Biomechanical signs
 - Previous history of pruning
 - External signs of decay
 - Field identification of fungi.
- 1.3.3 Where appropriate the process may then require data from further diagnostic tests such as:
- Maps of decay or cracking
 - Vitality testing
 - Root investigation
 - Pathogen identification.

¹ Principles of Tree Hazard Assessment and Management, DoE booklet Research for Amenity Trees No. 7, 1999

² The Body Language of Trees, DoE booklet Research for Amenity Trees No. 4, 1994

³ Common Sense Risk Management of Trees. National Tree Safety Group, The Forestry Commission 2011



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1.4 Plans and Documents

- 1.4.1 We have included the original tree location plan at Appendix 1.

1.5 Site Visit

- 1.5.1 The tree was surveyed by Simon Holmes, MSc MICFor, on the 12 June 2025; the conditions were dry and bright with good visibility and occasional light rain showers, and he had full access to the site in the company of Mr Archer.
- 1.5.2 The information contained in this report covers only the tree that we examined and reflects the condition of the specimen at the time of inspection.
- 1.5.3 The tree was inspected from the ground with the aid of binoculars, no climbing inspection was conducted.
- 1.5.4 The visual tree inspection offers no guarantee, either expressed or implied, of the internal condition of the stem furthermore, no warranty that problems or deficiencies may not arise in the future can be given.
- 1.5.5 Care has been taken to obtain all information from reliable sources, and all data has been verified where possible. However, no guarantee can be given of the accuracy of information provided by others.

2. THE SITE

2.1 Site Description

- 2.1.1 Emmbrook Court is located within a wooded area to the east of Shinfield Road. The woodland along the western boundary of the site is continuous and is considered high risk with the rest of the site comprising residential apartments, car parking, recreational areas and landscaped grounds.
- 2.1.2 The site has a wide range of tree species, the majority of which are native to the United Kingdom. The age range varies from juvenile, recently planted trees to mature specimens and monoliths.

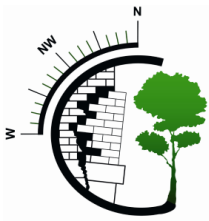
3. SURVEY FINDINGS AND OPINION

3.1 General

- 3.1.1 We conducted a detailed inspection utilising a nylon sounding mallet, stainless steel probe and an IML Resi PD400 decay detection drill. The tree is located close to the boundary fence with the A327 Shinfield Road.

3.2 Findings and Opinion

- 3.2.1 We found no evidence of root plate movement, no mounding or soil heave was observed around the tree. The stem has well defined buttressing on the tension side of the stem, see Figure 1 on page 6. There were no fungal fruiting bodies present however we detected isolated decay and a small cavity internally at ground level. The main stem leans towards the road, and there is evidence of bleeding canker, horse chestnut leaf miner and the tree has a poor physiological appearance.



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Figure 1, T479, buttressing, 12.6.2025

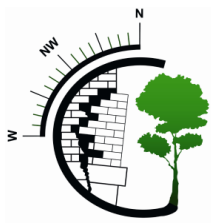


- 3.2.2 The bark was true to type and firmly attached. Bleeding lesions were observed on the main stem (see Figure 2 below) and the main stem has a natural lean towards the Shinfield Road.

Figure 2, T479, bleeding lesion, 12.6.2025



- 3.2.3 The main stem has an abrupt change in direction at approximately 9 metres above ground level (AGL), see Figure 3 on page 7. Most probably having been suppressed.



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Figure 3, T479 canopy lean, 12.6.2025

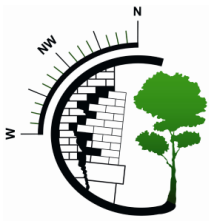


- 3.2.4 The main stem has two small cavities and a larger bark wound at approximately 11 metres AGL, see Figure 4 below.

Figure 4, T479 wounds on main stem, 12.6.2025



- 3.2.5 The canopy is thin with a poor physiological appearance containing small, chlorotic and clustered leaves, see Figure 5 on page 8. Peripheral die back and minor dead wood can also be seen throughout the canopy see examples at Figure 5 on page 8.
- 3.2.6 As per the instructions, decay detection was undertaken using an IML PD400 Resi drill to assess the stem for decay, a synopsis of the Resi drill is included at Appendix 2 along with copies of the results.
- 3.2.7 A total of 5 drillings were undertaken, four close to ground level at the cardinal points and one at 1.5 metres AGL on the north side as a control, copies are included at Appendix 2.



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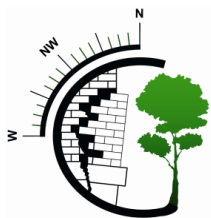
Figure 5, T479, canopy, 12.6.2025



- 3.2.8 Decay was detected at ground level on the north and east sides of the stem. The decay on the north side appeared at 16cm and a small cavity appears at 34cm, otherwise the wood density is normal for the species. Incipient decay was also detected at 14cm on the east side, again this appears isolated and the wood density either side of the decay is normal.

4. CONCLUSIONS

- 4.1.1 The decay detected at ground level on the north and east sides does not appear to be structurally significant at this time, however the presence of decay in mature trees, when combined with other pathogens requires careful consideration to reduce the risk associated with them to acceptable levels.
- 4.1.2 Bleeding canker of horse chestnut (*Pseudomonas syringae* pv. *Aesculi*) is a bacterial disease that affects the vascular system of trees of all ages. Young trees can be susceptible as the bark necrosis can completely girdle the main stem in a short time. Older trees can become seriously disfigured as large parts of the canopy die as a result of the damage caused to the vascular tissues.



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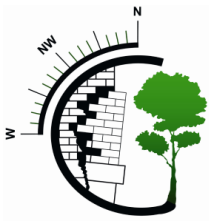
- 4.1.3 Horse chestnut leaf miner (HCLM) is caused by the caterpillars, or 'larvae', of the horse chestnut leaf miner moth 'mining' through the leaves as they feed. At high population densities, HCLM caterpillars can destroy most of the leaf tissue on an individual tree before the natural autumn leaf fall. The caterpillars can cause severe damage to horse chestnut leaves on an annual basis. However, the general tree condition and stem radial growth are not affected by HCLM, even over repeated annual attacks. Following an infestation, the trees will usually flush normally the following spring, when they can be attacked again by new generations of the pest which have over-wintered in leaf litter nearby. However, HCLM might exacerbate tree decline and eventual death triggered by one or more other threats; including bleeding canker of horse chestnut, horse chestnut leaf blotch, and damage to leaves caused by drought conditions.
- 4.1.4 The poor physiological condition and peripheral die back are most probably a combination of bleeding canker, HCLM and climatic conditions.
- 4.1.5 We are unable to provide a definitive opinion on the structural significance of the large wound and smaller cavities at 11 metres AGL. The cavities are typical of those resulting from pruning and the larger wound is characteristic of mechanical damage. They are located at a structurally significant position where the main stem changes direction and may increase the risk of stem failure at this location. The abrupt change in stem direction is most probably due to suppression by an adjacent tree that has now been removed or reduced.
- 4.1.6 The tree contributes to the landscape character of the area screening the adjacent road and provides amenity and ecological benefits. The decline of trees can take many years before they become a hazard and require remedial measures but the decline in physiological condition should not be underestimated. Decline may be accelerated by factors such as fungal pathogens or environmental influences such as drought.

5. RECOMMENDATIONS

5.1 Works Required

In preparing our recommendations consideration has been given to the physiological and structural condition, amenity and landscape character provided by the tree.

- 5.1.1 We recommend that the canopy is reduced primarily on the north and west sides by a maximum of 1 metre +/- 0.5 metre and that the east side if required is pruned to provide a balanced framework. This work to be undertaken between September to November 2025.
- 5.1.2 The tree must be visually inspected in June 2026 by a suitably qualified arborist and a full visual tree assessment with climbing section must be undertaken in June 2028. The tree must be inspected after any significant weather event such as periods of high winds or heavy rain.



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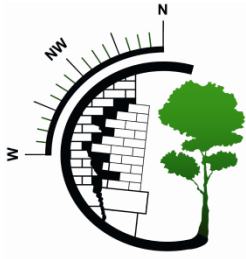
6. Statutory designations

- 6.1 Prior to undertaking any tree works it is essential that the works manager make an application to the Local Planning Authority for consent to carry out the works.

7. Arboricultural Standards

- 7.1 All tree works recommended should be done in accordance with British Standard BS 3998:2010. *Tree work-Recommendations* and should be undertaken by a properly qualified and experienced tree contracting company. It is advised that they should carry public and products liability insurance of £5 million cover.
- 7.2 Trees are dynamic structures and therefore subject to many changes. Wind loading, if sufficiently high enough, can blow over the healthiest of trees. Where decay or root structure is compromised there is an increased risk of failure and therefore regular inspection is recommended.

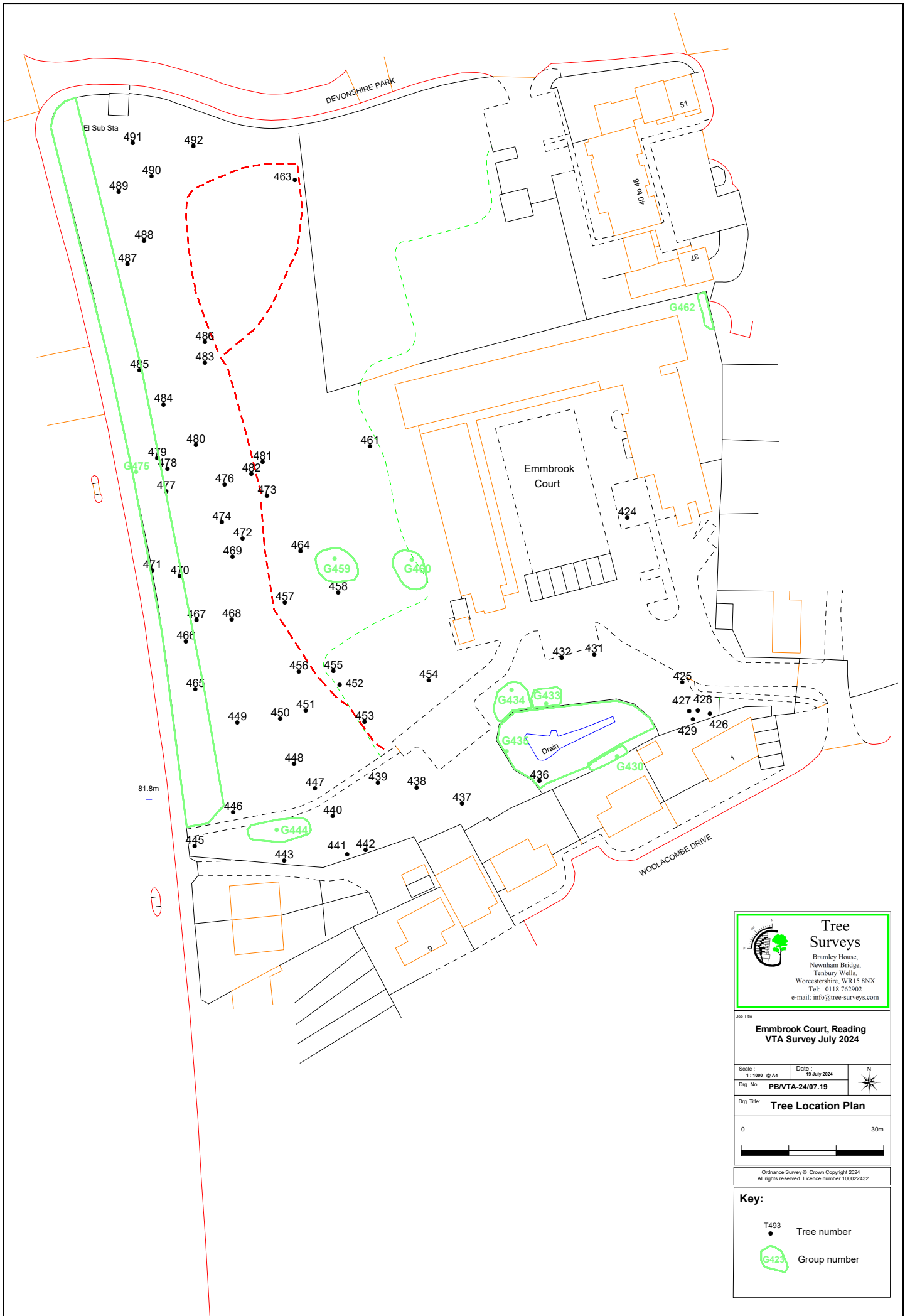
Simon Holmes, MSc MICFor
Chartered Arboriculturist
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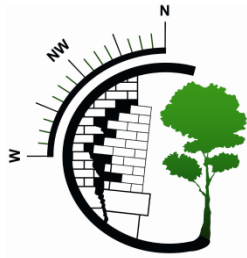


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APPENDIX 1





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APPENDIX 2

IML Resi PD400: The Resi is a mechanical drilling machine with a constant drive, which measures the drilling resistance and rotational speed along a needle, when inserted into the tree. The result is displayed on a digital panel and stored electronically at a scale of 1:1, measurement is in metric units.

The drilling and advance rate may be varied for hard or softwoods. The drilling resistance is correlated with the mechanical properties, and defective areas that have developed within the tree may be detected and assessed.

Examples of defects detected by the Resi may be dysfunctional areas such as internal cracks, areas of decay and hollowing. Remaining wall thickness may be determined to a depth of 400 millimetres. The instrument is adept at detecting the early stages of decay in white rots as well as detecting brown rots at an early stage.

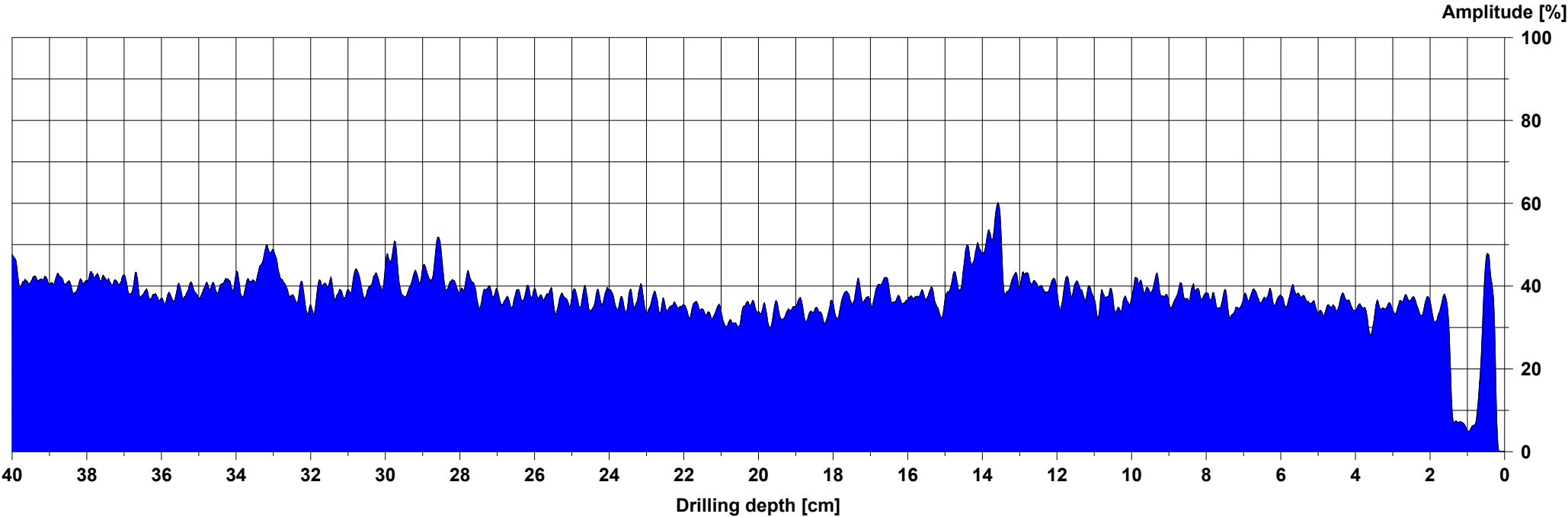
The drilling needle is specially formed and the tip is only 3 millimetres wide with a shaft diameter of 1.5 millimetres, thereby keeping internal damage to a minimum and reducing the risk of further fungal infection.

Interpreting these drilling readings:

The object data field (top left of each page) provides information on the date, depth, needle speed and site-specific information. The written assessment field (bottom right of each page) provides a detailed analysis of specific areas of dysfunction and is often colour coded. Readings are normally from right (entry into the tree) to left, with any specific comments in the box bottom right.

Measuring / object data

Measurement no.:	5	Speed	: 2500 r/min	Diameter:	72,00 cm
ID number	: T479	Needle state:	---	Level	: 150cm
Drilling depth	: 40,08 cm	Tilt	: 0°	Direction:	North
Date	: 12.06.2025	Offset	: 88 / 257	Species	: Horse chestnut
Time	: 15:16:12	Avg. curve	: off / off	Location	: Embrook Court
Feed	: 150 cm/min	Name	:		



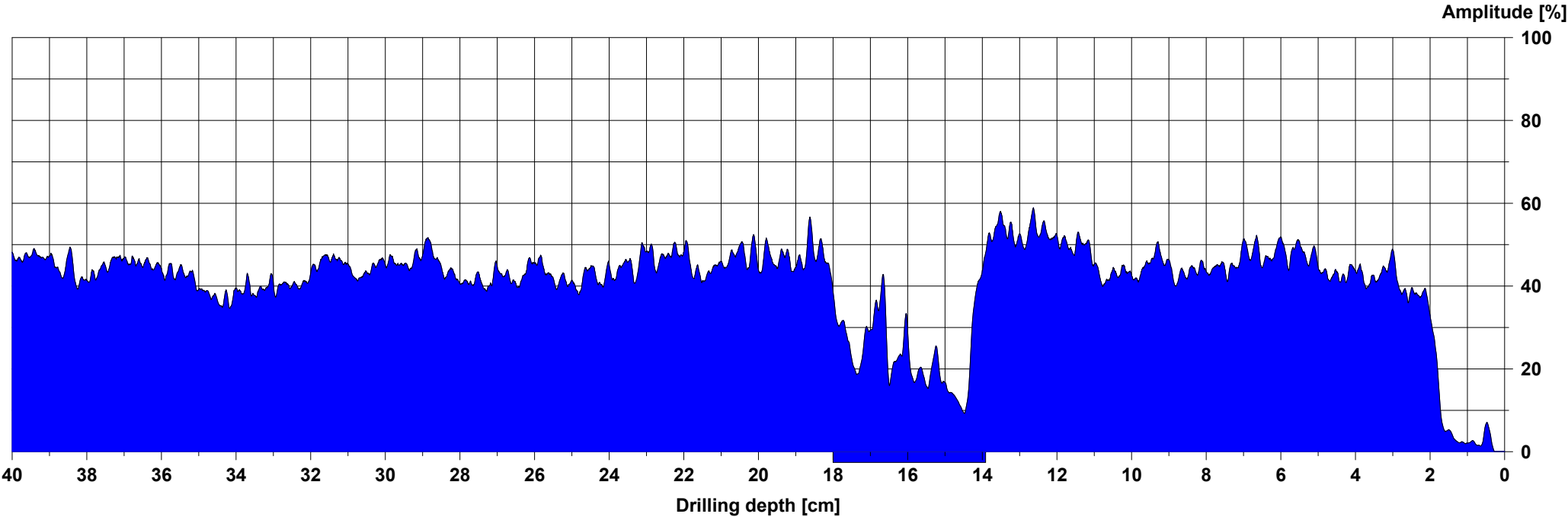
Assessment

Comment

Control test undertaken at 1.5 metres above ground level on the north side. No significant decay at the test location.

Measuring / object data

Measurement no.:	2	Speed	: 2500 r/min	Diameter:	72,00 cm
ID number	: T479	Needle state:	---	Level	: 10cm
Drilling depth	: 40,08 cm	Tilt	: +1°	Direction:	East
Date	: 12.06.2025	Offset	: 112 / 260	Species	: Horse chestnut
Time	: 15:13:23	Avg. curve	: off / off	Location	: Embrook Court
Feed	: 150 cm/min	Name	:		



Assessment

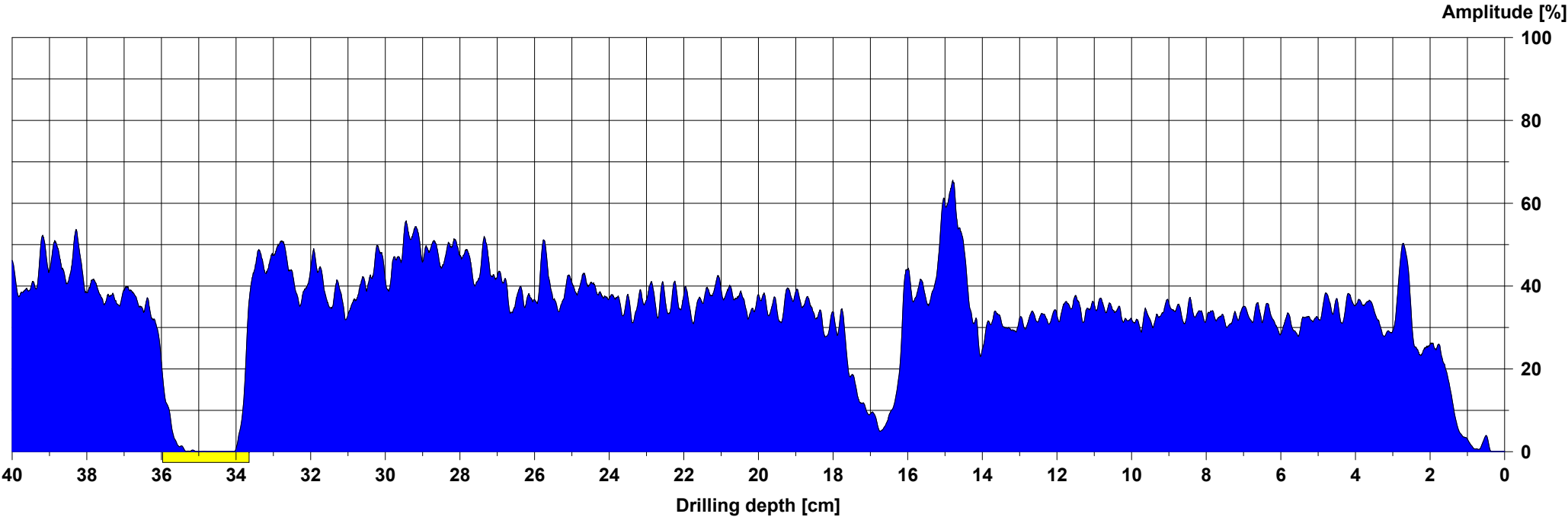
From 13,91 cm to 18,00 cm : Incipient decay

Comment

Test undertaken on east side close to ground level. Incipient decay detected at 14cm appears isolated.

Measuring / object data

Measurement no.:	1	Speed	: 2500 r/min	Diameter:	72,00 cm
ID number	: T479	Needle state:	---	Level	: 10cm
Drilling depth	: 40,12 cm	Tilt	: 0°	Direction:	North
Date	: 12.06.2025	Offset	: 126 / 261	Species	: Horse chestnut
Time	: 15:12:24	Avg. curve	: off / off	Location	: Embrook Court
Feed	: 150 cm/min	Name	:		



Assessment

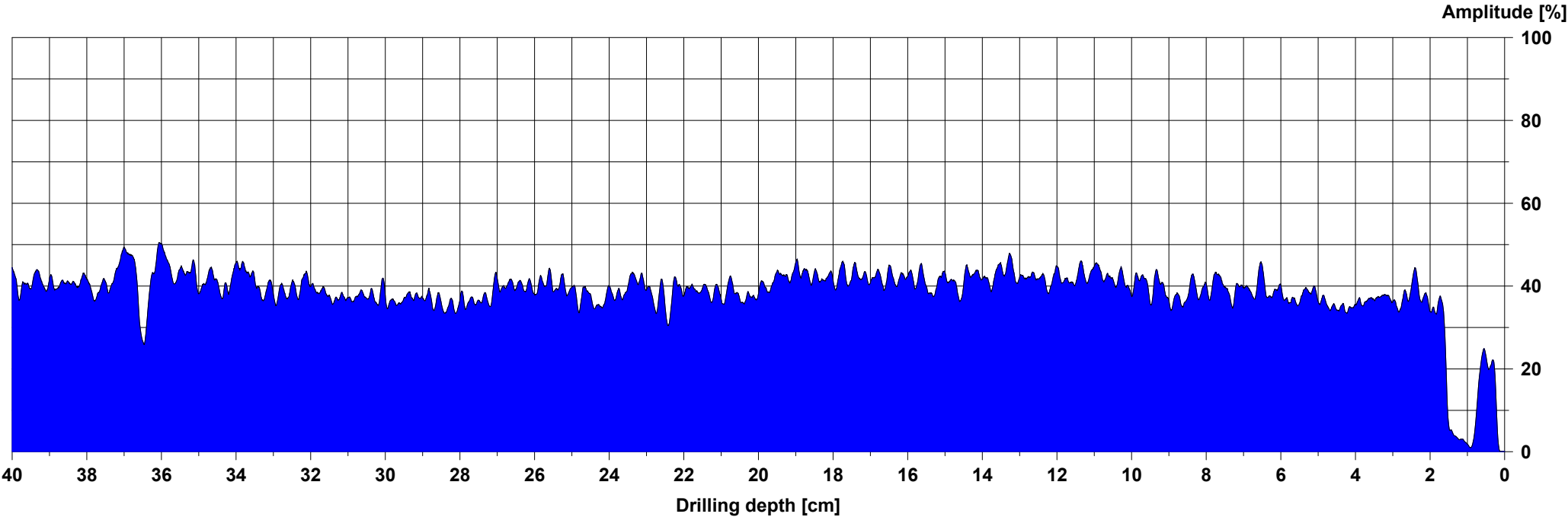
From 33,65 cm to 35,97 cm	: Decay
From 0,00 cm to 0,00 cm	: Cavity

Comment

Test undertaken on north side close to ground level. Decay detected at 16cm with isolated cavity at 34cm

Measuring / object data

Measurement no.:	3	Speed	: 2500 r/min	Diameter:	72,00 cm
ID number	: T479	Needle state:	---	Level	: 10cm
Drilling depth	: 40,07 cm	Tilt	: 0°	Direction:	South
Date	: 12.06.2025	Offset	: 99 / 256	Species	: Horse chestnut
Time	: 15:14:25	Avg. curve	: off / off	Location	: Embrook Court
Feed	: 150 cm/min	Name	:		



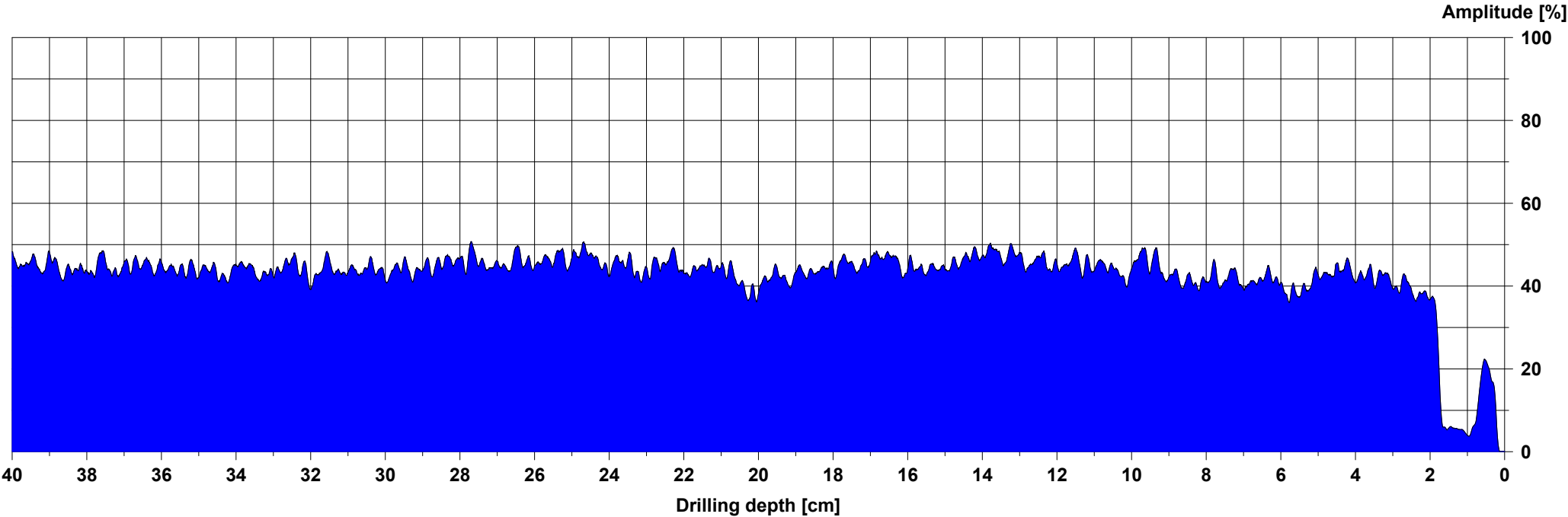
Assessment

Comment

Test undertaken on south side close to ground level. No significant decay detected at the test location.

Measuring / object data

Measurement no.:	4	Speed	: 2500 r/min	Diameter:	72,00 cm
ID number	: T479	Needle state:	---	Level	: 10cm
Drilling depth	: 40,09 cm	Tilt	: 0°	Direction:	West
Date	: 12.06.2025	Offset	: 90 / 255	Species	: Horse chestnut
Time	: 15:15:13	Avg. curve	: off / off	Location	: Embrook Court
Feed	: 150 cm/min	Name	:		



Assessment

Comment

Test undertaken on west side close to ground level. No decay detected at test location.