

# Trevor Heaps

## Arboricultural Consultancy Ltd.

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### Resistograph Report

For

**Yiewsley Grange, High Street, West Drayton  
UB7 7QP**

Prepared for Heritage Trees Ltd.

Prepared by Trevor Heaps BSc, MICFor, R. Arbor.A.

Date: 25<sup>th</sup> July 2025

Ref: TH 5318



## Summary

Further to a recent visual tree assessment (VTA) of the trees at Yiewsley Grange, three trees (Copper Beech T<sub>3</sub>, Oak T<sub>50</sub> and Horse Chestnut T<sub>52</sub>) were found to have stem defects that needed further investigations, and so a resistograph test was carried out on each to determine the extent and significance of any decay present.

This report provides the analysis and conclusions of the tests.

To summarise, the Copper Beech T<sub>3</sub> should be lightly reduced, the Oak T<sub>40</sub> does not require any work and the Horse Chestnut T<sub>52</sub> should be heavily reduced (or the area beneath should be avoided).

Figure 1



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## 1.0 Introduction

1.1 I am Trevor Heaps, Director of Trevor Heaps Arboricultural Consultancy Ltd. I hold a First-Class Honours Degree in Arboriculture; I am a Chartered Arboriculturist and a professional member of the Institute of Chartered Foresters; and I am also a Registered Consultant with the Arboricultural Association. Further information about my qualifications and experience is provided in Appendix 1.

1.2 The basic principle in Law is that a tree owner has a duty to take reasonable care to protect those reasonably likely to be affected by their trees.

1.3 Subsequently, a tree owner, or those responsible for the tree(s), must take steps to ensure they are aware of foreseeable risks that may cause harm; and they should take appropriate remedial action to protect those who are reasonably likely to be affected.

1.4 Guidance issued by the Government, the Forestry Commission and the Arboricultural Association advises that a regular tree survey is undertaken by a suitably qualified tree expert. Failure to do so may leave those responsible liable to prosecution.

1.5 Contact details:

Who	Name	Organisation	Details
Arboricultural Consultant	Trevor Heaps	THAC Ltd. 12 Plover Drive, Milford-on-Sea, Hampshire, SO41 0XF	Tel: 07957 763 533 E-mail: <a href="mailto:trevor@trevorheaps.co.uk">trevor@trevorheaps.co.uk</a>
Client		Heritage Trees Ltd.	
London Borough of Hillingdon - LPA	Tree Officer	Civic Centre, High Street, Uxbridge, UB8 1UW	Tel: 01895 556000 E-mail: <a href="mailto:trees@hillingdon.gov.uk">trees@hillingdon.gov.uk</a>

## 2.0 Instruction

2.1 We are instructed to carry out a resistograph test on one Beech, one Oak and one Horse Chestnut.

2.2 Based on the results of the resistograph tests, we are instructed to provide a report to make recommendations to manage the trees' safety.

2.3 The purpose of this report is to demonstrate that the tree's conditions have been checked by a suitably qualified tree expert and to ensure that all reasonable measures are taken to ensure that persons and property are not at risk of harm from the trees.

### **3.0 Statutory tree protection**

3.1 According to the Council's website some trees within and adjacent to this site are covered by a Tree Preservation Order (TPO 303); which means that if any tree works are required (to the trees covered by the TPO), an application must be made to the Council.

### **4.0 Ecological constraints**

4.1 The Wildlife and Countryside Act 1981 (as amended by the Countryside and Rights of Way Act 2000) provides statutory protection to birds, bats and other species that inhabit trees.

4.2 These animals could impose significant constraints on the timing of any recommended tree works. You are therefore advised to seek advice from a suitably qualified ecologist prior to the start of any tree works.

### **5.0 The tree survey**

5.1 The trees were tested from ground level with a IML Resistograph (PD400) by Trevor Heaps on the 23<sup>rd</sup> July 2025.

5.2 The weather was dry and visibility was good.

5.3 The drill graph readings for these assessments are provided at Appendix 5.

### **6.0 General description and condition of the trees**

6.1 The Copper Beech T3 is growing at the front of the site and leans slightly out to the west. The tree has a large wound on the eastern side of the stem (the part that supports the lean). See photo 1.

6.2 The Oak T50 is growing at the rear of the site, in a 'woodland school' area. The initial VTA survey noted several cavities at the base of the tree.

6.3 The Horse Chestnut T52 is growing at the far rear end of the site, again in a 'woodland' school area. The tree has a large cavity on its western side (see photo 2) and a large tear out wound higher in the crown. Horse Chestnuts have soft heartwood that can decay quite quickly.

**Photo 1**



**Photo 2**



## 7.0 Results

7.1 The Beech T<sub>3</sub> has a stem diameter of 860mm, which means that (based on research by Mattheck & Breloer (1995) it needs a minimum wall thickness of 129mm to safely support it.

7.2 Readings were taken at 1.5 up the stem. The amount of sound wood was measured as follows:

At 1m:

Northern side – 150 mm

North-eastern side – 120 mm

Eastern side – 210 mm

South-eastern side – 140 mm

Southern side – 140 mm

South-western side – 350 mm

Western side – 340 mm

North-western side – 260 mm

7.3 The Oak T<sub>50</sub> has a stem diameter of 970mm, which means that (based on research by Mattheck & Breloer (1995) it needs a minimum wall thickness of 145mm to safely support it.

7.4 Readings were taken at 1.5 up the stem. The amount of sound wood was measured as follows:

At 1m:

Northern side – 400 mm

North-eastern side – 400 mm

Eastern side – 400 mm

South-eastern side – 400 mm

Southern side – 400 mm

South-western side – 400 mm

Western side – 400 mm

North-western side – 400 mm

7.5 The Horse Chestnut T52 has a stem diameter of 1040mm, which means that (based on research by Mattheck & Breloer (1995) it needs a minimum wall thickness of 156mm to safely support it.

7.6 Readings were taken at 1.5 up the stem. The amount of sound wood was measured as follows:

At 1.5m:

Northern side - 400 mm

North-eastern side - 400 mm

Eastern side - 400 mm

South-eastern side - 400 mm

Southern side - 400 mm

South-western side - 290 mm

Western side - N/A - Cavity opening

North-western side - 300 mm

## 8.0 Discussion

8.1 From these results, it appears that the Beech T3 has a column of decay that, in parts, is close to the safety threshold. The wound is sealing well and the crown is healthy; however, it would be prudent to reduce the size of the crown to reduce the forces acting on the base of the tree.

8.2 The Oak T50 appears to have a completely solid stem and so the small cavities are almost certainly just gaps between the buttresses.

8.3 The stem of the Horse Chestnut T52 appears to be in better condition than originally assumed; however, the heartwood decay will slowly progress and the column of decay will likely connect to the large tear out wound noted higher up in the crown. It is reasonably foreseeable that failures will occur in the future.

## 9.0 Recommendations

9.1 The Copper Beech T<sub>3</sub> should be crown reduced by around 3-4m all round and managed with regular re-pruning to contain its size. Further resistograph tests could be carried out to track the progress of the decay.

9.1.1 The initial crown reduction should be carried out within the next 3 months.

9.2 No work is required to Oak T<sub>50</sub>.

9.3 The Horse Chestnut T<sub>52</sub> should be crown reduced by around 4-5m all round and managed with regular re-pruning to contain its size. Further resistograph tests could be carried out to track the progress of the decay.

9.3.1 The initial crown reduction should be carried out within the next 2-3 years.

9.3.2 Alternatively, the 'woodland school' should not use any of the areas beneath the tree's crown.

## 10.0 Signature

10.1 This report represents a true and factual account of all potential arboricultural issues and makes recommendations for appropriate remedial action.

**Signed**



.....  
**Trevor Heaps**

Chartered Arboriculturist  
**BSc (Hons), MArborA, MICFor.**

**Dated**

25<sup>th</sup> July 2025

## Appendix 1 - Professional résumé

I am Trevor Heaps, Director of Trevor Heaps Arboricultural Consultancy Ltd. I hold a First-Class Honours Degree in Arboriculture; I am a Chartered Arboriculturist and a professional member of the Institute of Chartered Foresters; and I am also a Registered Consultant with the Arboricultural Association.

### Professional training

- Arboriculture and Bats: Scoping Surveys for Arborists (BCT & AA) – October 2017
- Tree Science (AA) – June 2016
- OPM (Oak Processionary Moth) Training (FC) – May 2016
- Visual Tree Assessment (Arboricultural Association) - October 2015
- Trees and the Law (Dr Charles Mynors) - June 2015
- Mortgage (Home Buyers) Report Writing (LANTRA / CAS) - February 2015
- Tree Preservation Orders - effective application (LANTRA / CAS) - November 2014
- Professional Tree Inspection 3-day course (LANTRA / AA) - July 2014
- Arboricultural Consultancy Course (AA) - May 2014
- Further down the subsidence trail 1-day course (AA) - April 2013
- Getting to grips with subsidence 1-day course (AA) - November 2012

AA – Arboricultural Association

BCT – Bat Conservation Trust

CAS – Consulting Arborist Society

FC – Forestry Commission

Appendix 2 - Tree data schedule (from original tree survey)

Ref	Species	Comments	Likelihood of problem occurring within 3 years	Risk Index (0-100 / low-high)	Recommendations	Priority	When to re-inspect
T3	<i>Fagus sylvatica 'Purpurea'</i> (Copper Beech)	Stem is slightly leaning (to the west) and suppressed. Vertical cavity at rear. Wound sealing well, but in a high-use area.	Possible	10	16 <sup>th</sup> April 2024 - Carry out resistograph test to determine extent and significance of decay.  8 <sup>th</sup> April 2025 - not clear whether testing was undertaken, need to check and if not then commission one.	Within 1 year	Within 3 years
T50	<i>Quercus robur</i> (Common Oak)	Causing minor cracking to brick wall. Hollow at base, but crown seems normal.	Possible	12.5	16 <sup>th</sup> April 2024 - Check in autumn for fruiting bodies and/or carry out resistograph test to determine extent and significance of decay.  8 <sup>th</sup> April 2025 - neither appears to have been undertaken. Autumn insp. first option.	Within 1 year	Within 1 year
T52	<i>Aesculus hippocastanum</i> (Horse Chestnut)	Large cavity noted on southern side. Old tear-out wound/s noted.	Possible	10	16 <sup>th</sup> April 2024 - Carry out resistograph test to determine extent and significance of decay.  8 <sup>th</sup> April 2025 - unclear whether works have been commissioned, if not, they should be as soon as possible.	As soon as practicable	Within 3 years

## Appendix 3 - Tree data schedule explanatory notes

This section explains the terms used in the **Tree data schedule** (Appendix 2).

**Ref:** Each item of vegetation has its own unique number prefixed by a letter such that:

**T1**=Tree      **S2**=Shrub or stump      **G3**=Group      **H4**=Hedge      **W5**=Woodland

**Species:** Common names are given (with Latin names given in brackets)

**Comments:** Tree form and pruning history are recorded along with an account of any significant defects

**Likelihood of failure or problem occurring:** The tree surveyor's opinion on how likely it is the tree or part of it will fail or cause an issue (such as direct or indirect damage) within 1 year.

**Risk Index:** An estimate of risk (0 = no risk to 100 = very high risk) based on a calculation made from the assumed occupancy, the size of the tree (or defect) and the assumed likelihood of a problem occurring (see above). This allows work to be prioritised.

**Recommendations:** These are based on any defects / problems observed and are intended to ensure that the tree is maintained in an acceptable condition.

**Priority:** Depending upon the threat posed by the tree, and the likelihood of a problem occurring, any recommendations made should be carried out within the prescribed timescales.

**When to re-inspect:** The suggested interval before the next inspection should be carried out.

## Appendix 4–References

<sup>1</sup>OPSTD/Agriculture and Waste Recycling Sector/ Agriculture Safety Section (2015), *Management of the risk from falling trees or branches*. Available at [https://www.hse.gov.uk/foi/internalops/sims/ag\\_food/010705.htm#](https://www.hse.gov.uk/foi/internalops/sims/ag_food/010705.htm#) (Accessed: 14 January 2020).

<sup>2</sup>Forestry Commission (2011), *Common sense risk management of trees, Managing trees for safety*.

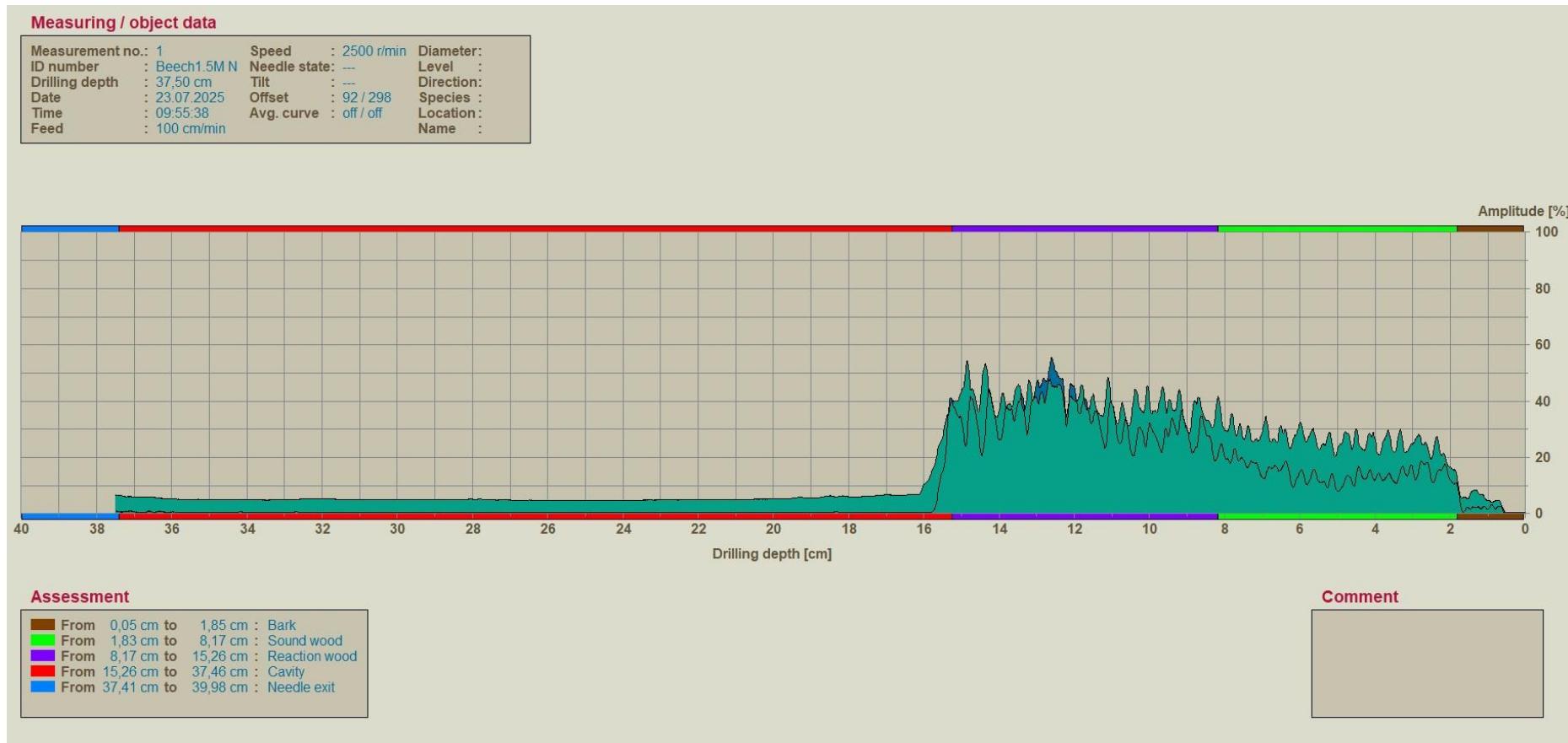
<sup>3</sup>Arboricultural Association (2016), *Tree Surveys: A guide to good practice, Guidance Note 7*.

<sup>4</sup>Mattheck & Breloer (1994), *The Body Language of Trees*, 1994.

<sup>5</sup>Watson and Green (2011), *Fungi on Trees – an Arborists' Field Guide*.

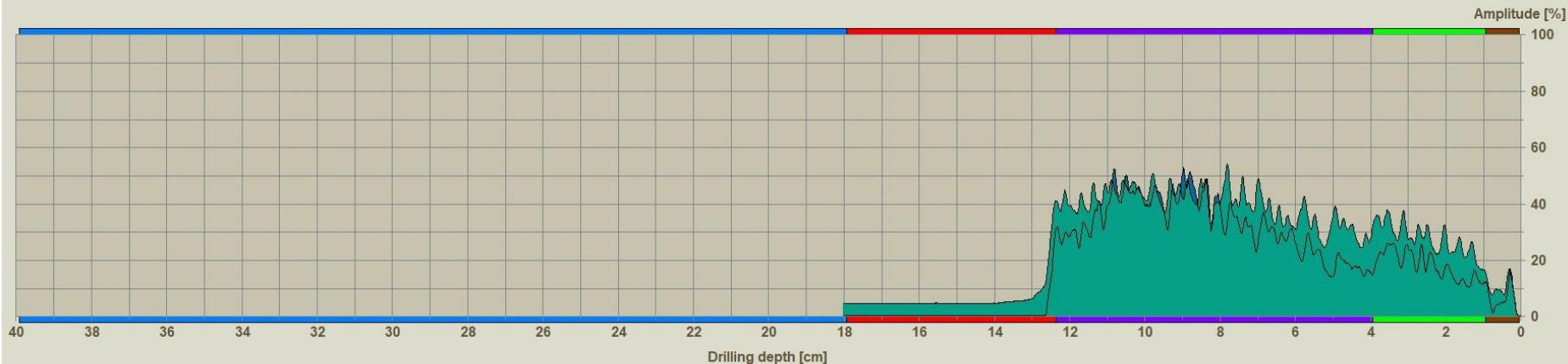
## Appendix 5-Readings

### Beech T3



**Measuring / object data**

Measurement no.:	2	Speed :	2500 r/min	Diameter:
ID number:	Beech1.5M NE	Needle state:	---	Level:
Drilling depth:	18,02 cm	Tilt:	---	Direction:
Date:	23.07.2025	Offset:	87 / 287	Species:
Time:	09:56:35	Avg. curve:	off / off	Location:
Feed:	100 cm/min			Name:



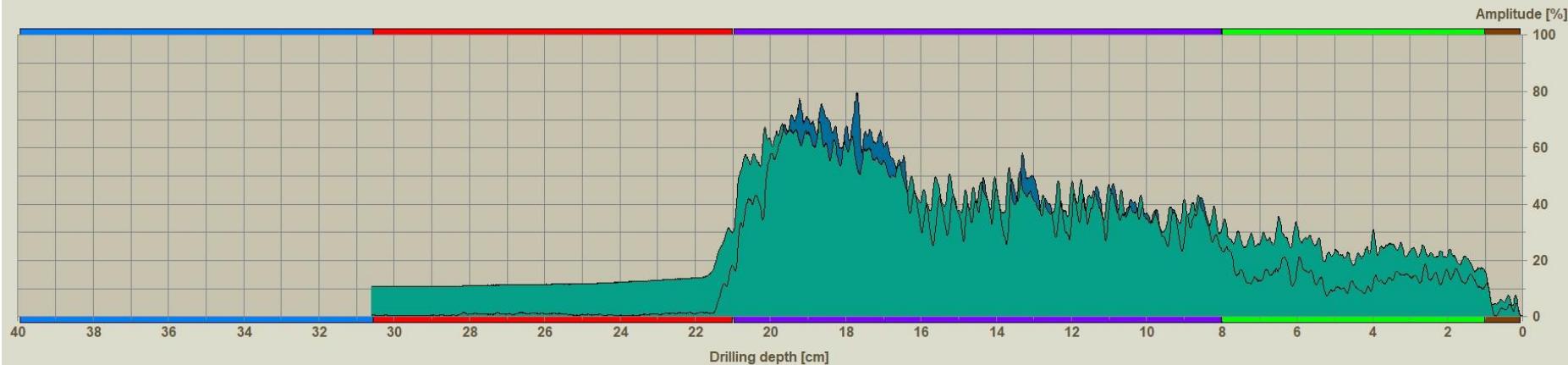
**Assessment**

- From 0,05 cm to 0,98 cm : Bark
- From 0,96 cm to 3,98 cm : Sound wood
- From 3,94 cm to 12,38 cm : Reaction wood
- From 12,36 cm to 17,96 cm : Cavity
- From 17,94 cm to 39,91 cm : Needle exit

**Comment**

**Measuring / object data**

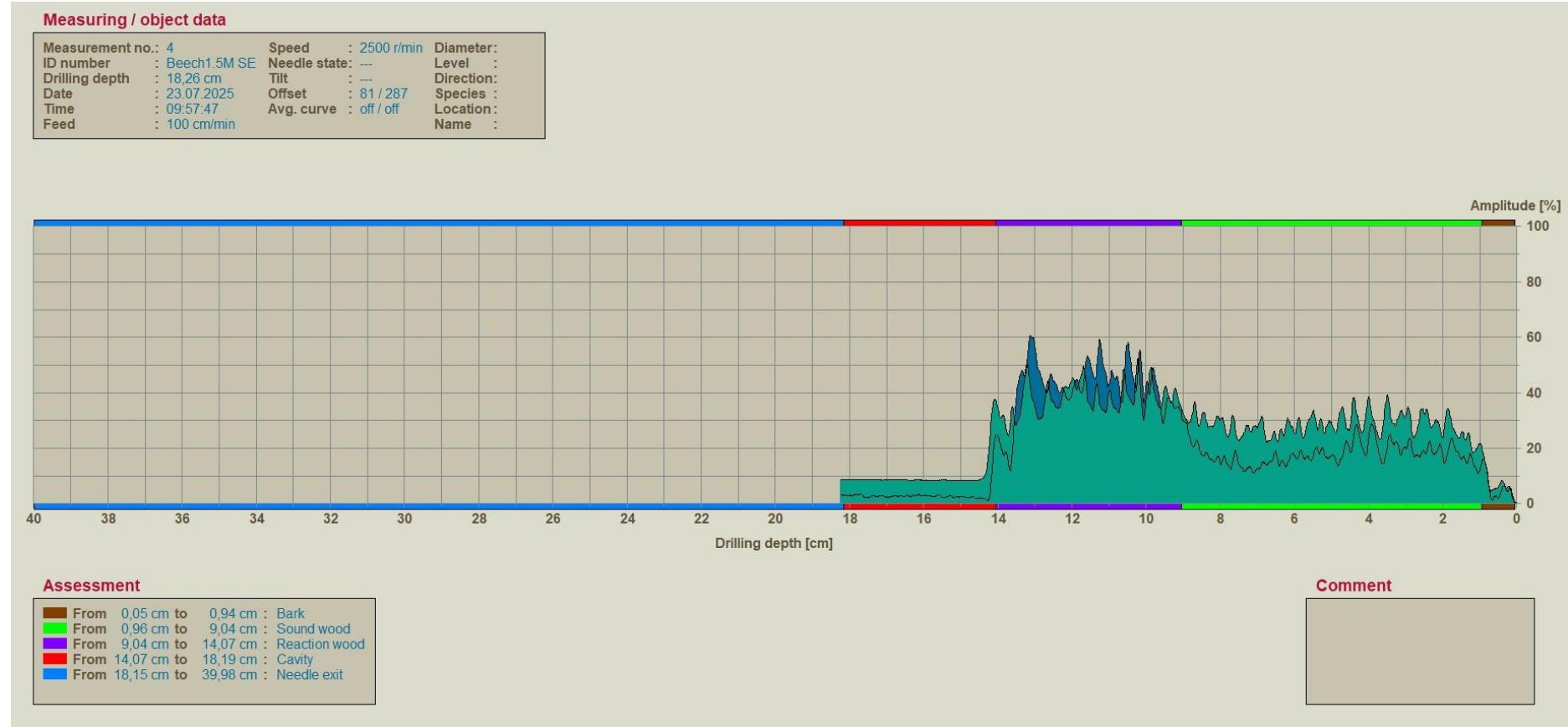
Measurement no.:	3	Speed :	2500 r/min	Diameter:
ID number:	Beech 1.5m E	Needle state:	---	Level:
Drilling depth:	30,60 cm	Tilt:	---	Direction:
Date:	23.07.2025	Offset:	83 / 285	Species:
Time:	09:57:05	Avg. curve:	off / off	Location:
Feed:	100 cm/min			Name:

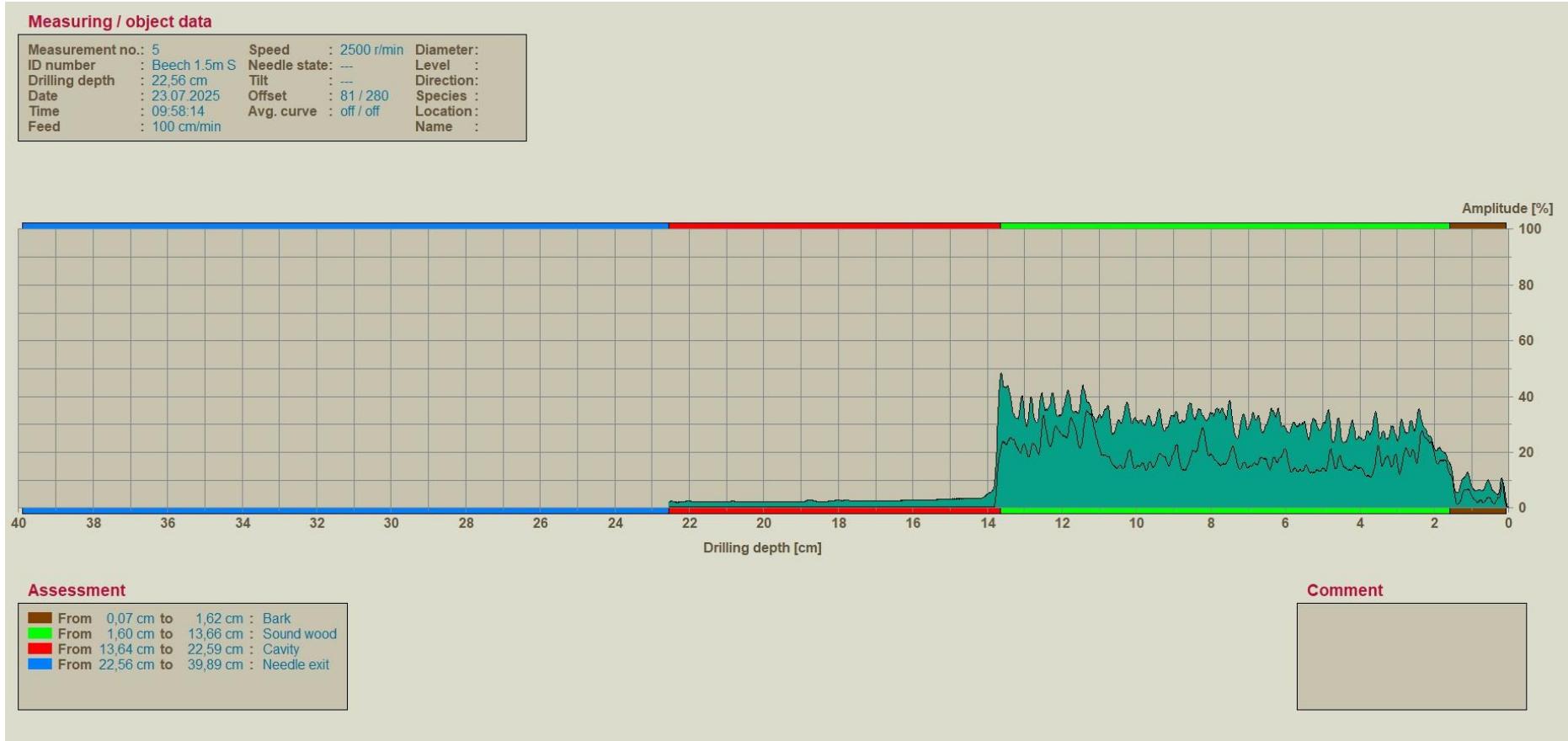


**Assessment**

From 0,07 cm to 1,01 cm :	Bark
From 1,01 cm to 7,99 cm :	Sound wood
From 8,01 cm to 20,98 cm :	Reaction wood
From 21,01 cm to 30,57 cm :	Cavity
From 30,55 cm to 39,95 cm :	Needle exit

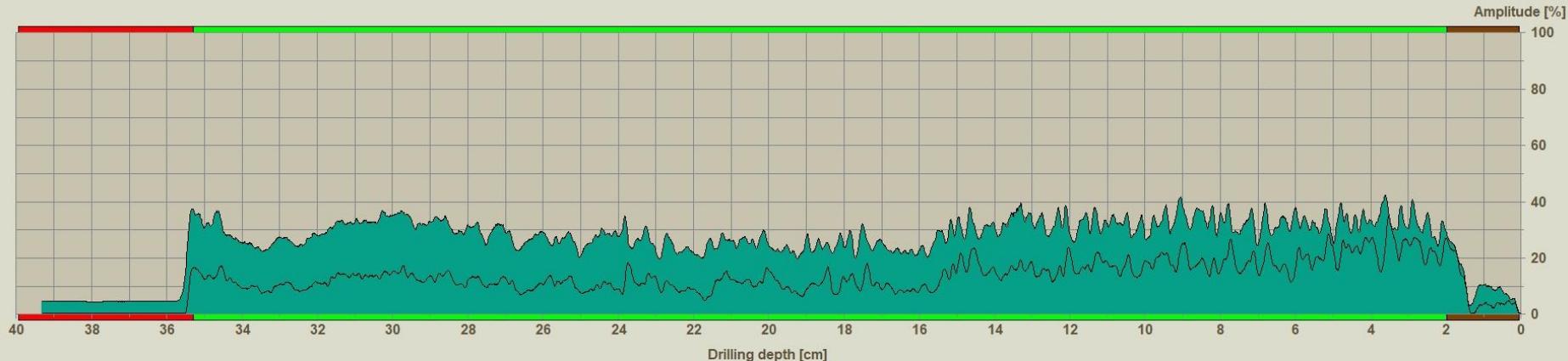
**Comment**





**Measuring / object data**

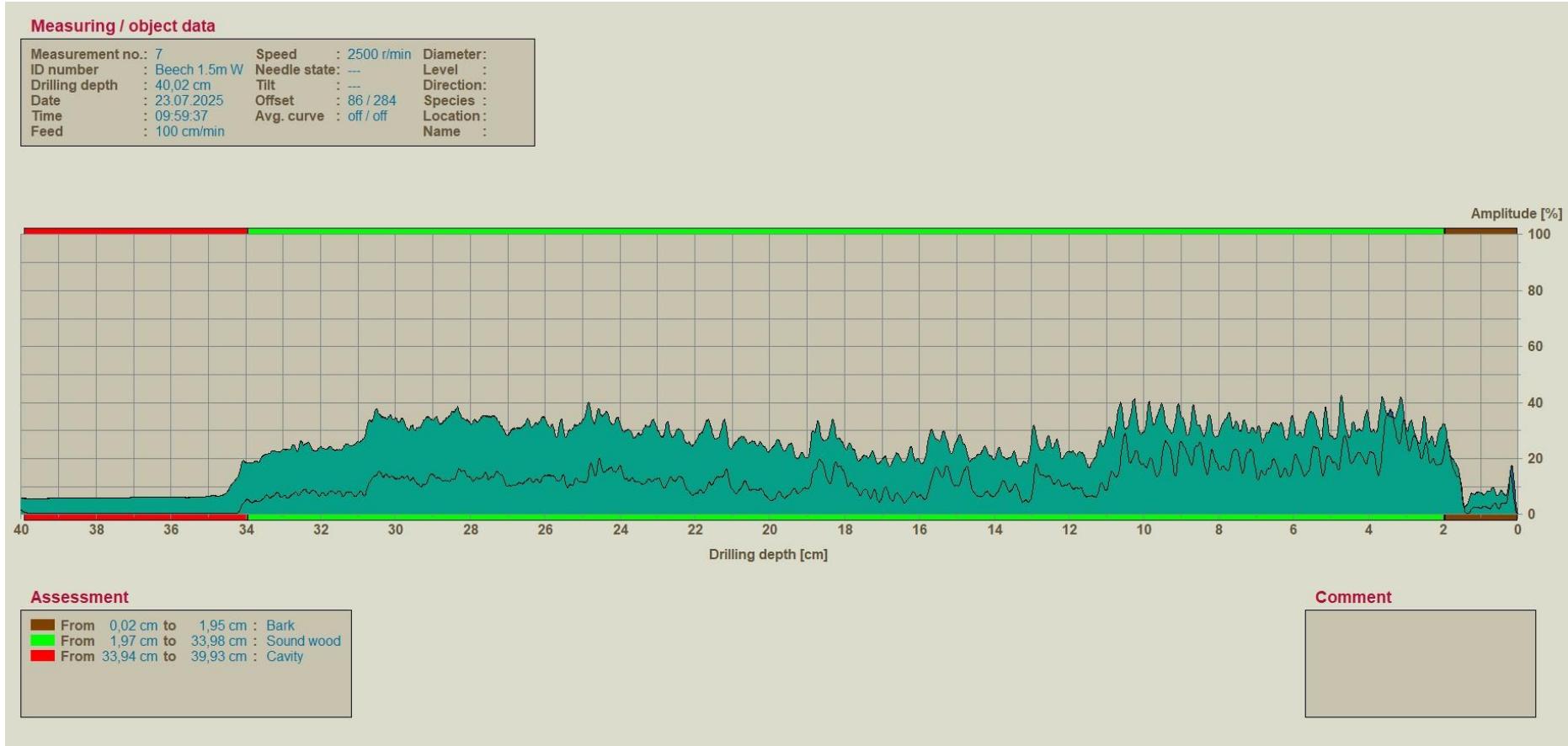
Measurement no.:	6	Speed :	2500 r/min	Diameter:
ID number	Beech 1.5m SW	Needle state:	--	Level :
Drilling depth	39,33 cm	Tilt :	--	Direction:
Date	23.07.2025	Offset :	84 / 296	Species :
Time	09:58:47	Avg. curve :	off / off	Location:
Feed	100 cm/min			Name :



**Assessment**

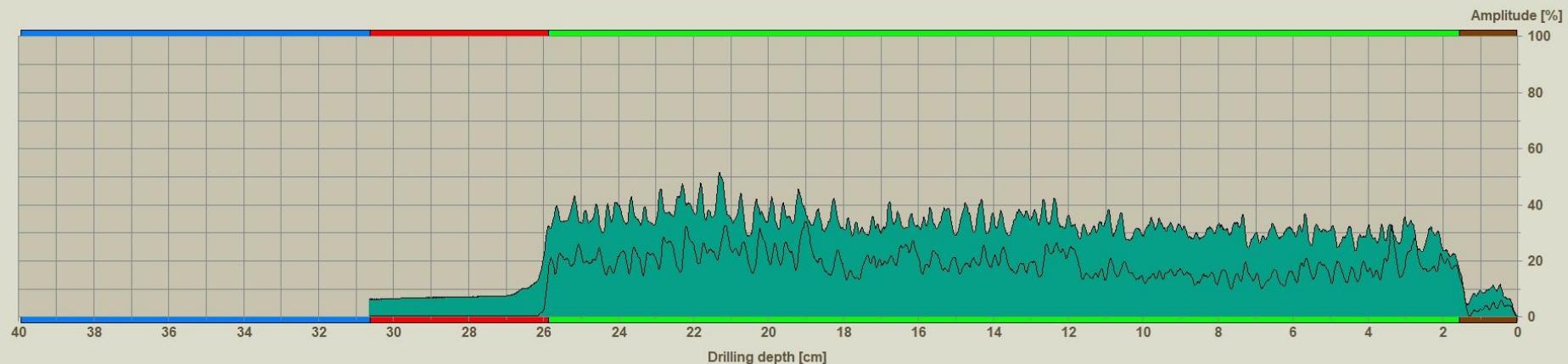
From 0,05 cm to 2,01 cm :	Bark
From 1,99 cm to 35,33 cm :	Sound wood
From 35,29 cm to 39,95 cm :	Cavity

**Comment**



**Measuring / object data**

Measurement no.:	8	Speed :	2500 r/min	Diameter:
ID number	: Beech 1.5m NW	Needle state:	--	Level :
Drilling depth	: 30,65 cm	Tilt	: --	Direction:
Date	: 23.07.2025	Offset	: 84 / 283	Species :
Time	: 10:00:40	Avg. curve	: off / off	Location:
Feed	: 100 cm/min			Name :



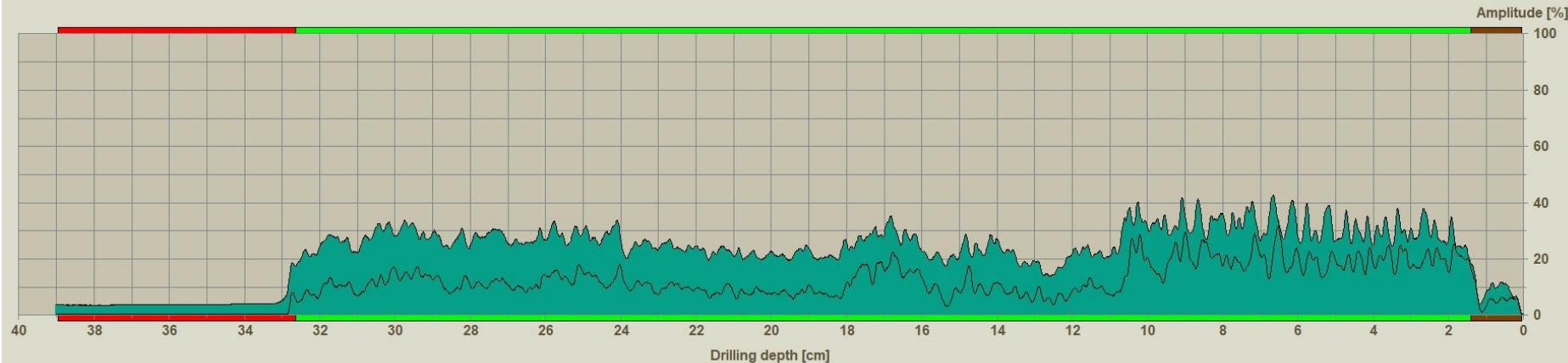
**Assessment**

From 0,02 cm to 1,56 cm :	Bark
From 1,56 cm to 25,90 cm :	Sound wood
From 25,88 cm to 30,62 cm :	Cavity
From 30,64 cm to 39,95 cm :	Needle exit

**Comment**

**Measuring / object data**

Measurement no.:	9	Speed :	2500 r/min	Diameter:
ID number	Beech 500mm Cont	Needle state:	—	Level :
Drilling depth	39,02 cm	Tilt	—	Direction:
Date	23.07.2025	Offset	78 / 282	Species :
Time	10:01:51	Avg. curve	off / off	Location:
Feed	100 cm/min			Name :

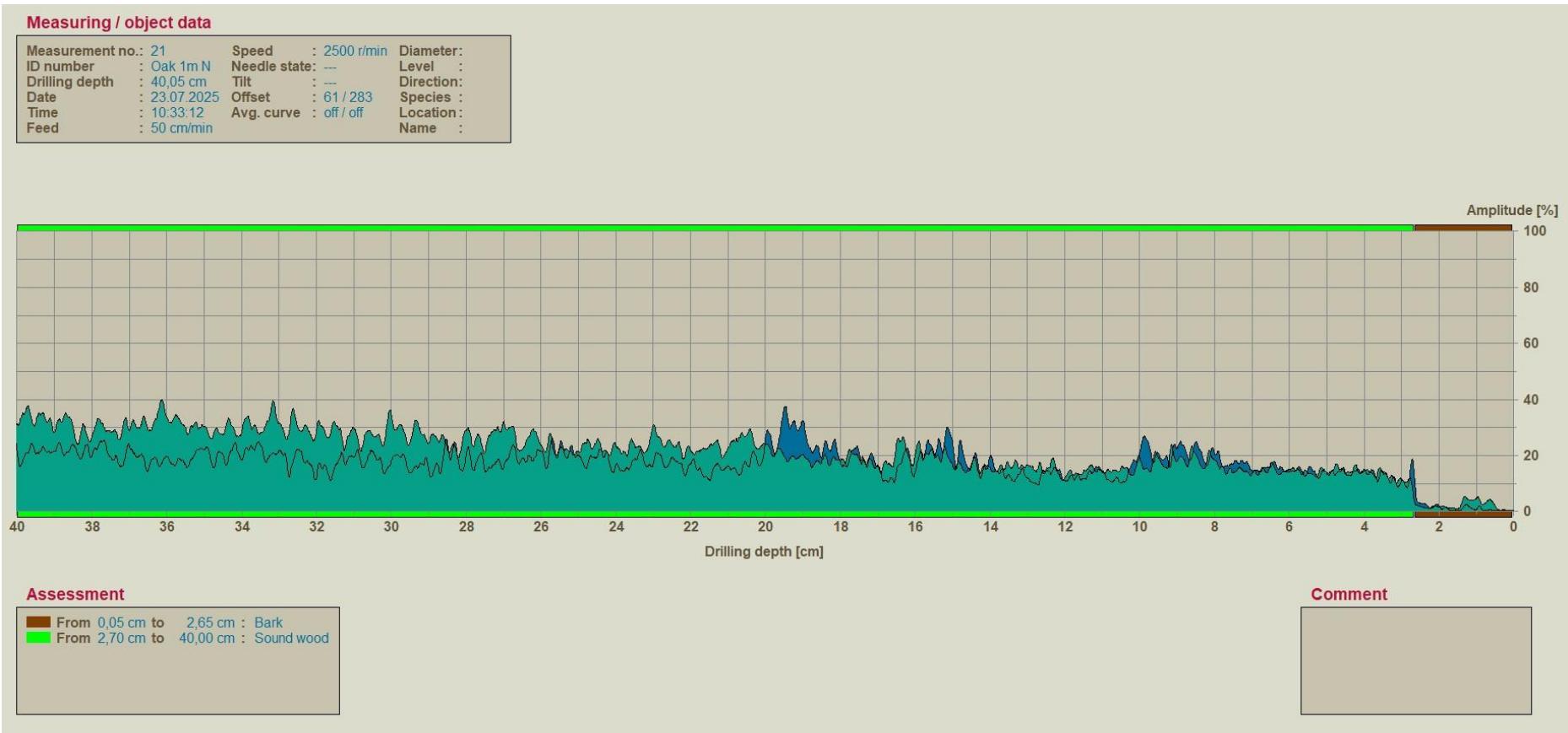


**Assessment**

From 0,05 cm to 1,42 cm :	Bark
From 1,40 cm to 32,70 cm :	Sound wood
From 32,65 cm to 38,97 cm :	Cavity

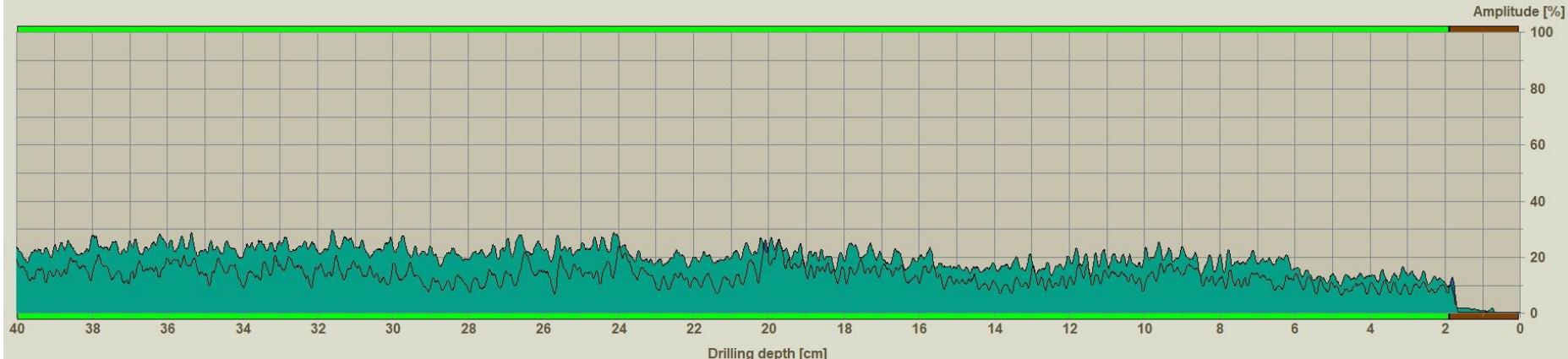
**Comment**

## Oak T50



**Measuring / object data**

Measurement no.:	22	Speed :	2500 r/min	Diameter:
ID number :	Oak 1m NE	Needle state:	---	Level :
Drilling depth :	40,04 cm	Tilt :	---	Direction:
Date :	23.07.2025	Offset :	67 / 273	Species :
Time :	10:34:29	Avg. curve :	off / off	Location:
Feed :	50 cm/min			Name :



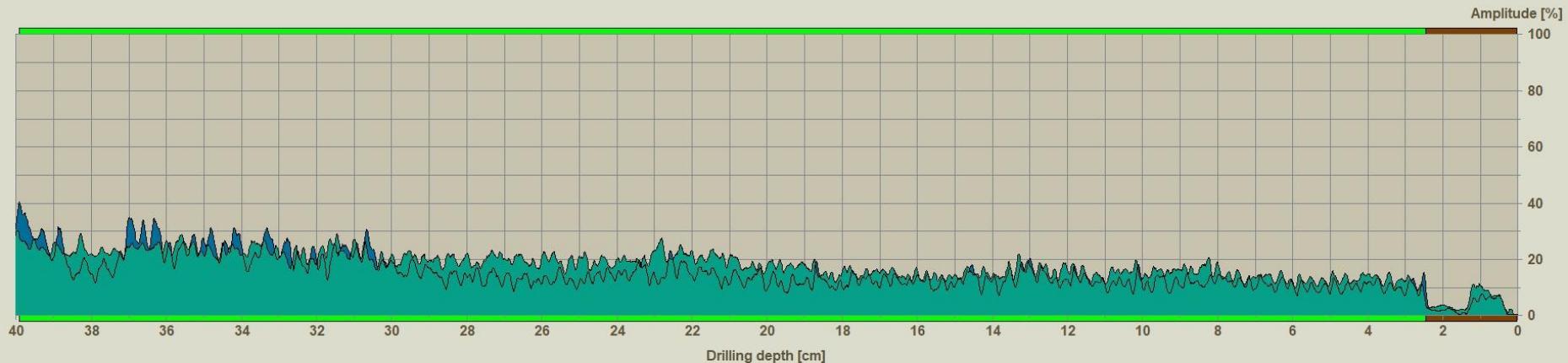
**Assessment**

  From 0,05 cm to 1,88 cm : Bark  
  From 1,90 cm to 39,98 cm : Sound wood

**Comment**

**Measuring / object data**

Measurement no.:	23	Speed :	2500 r/min	Diameter:
ID number :	Oak1mE	Needle state:	---	Level :
Drilling depth :	40,06 cm	Tilt :	---	Direction:
Date :	23.07.2025	Offset :	63 / 271	Species :
Time :	10:35:44	Avg. curve :	off / off	Location:
Feed :	50 cm/min			Name :



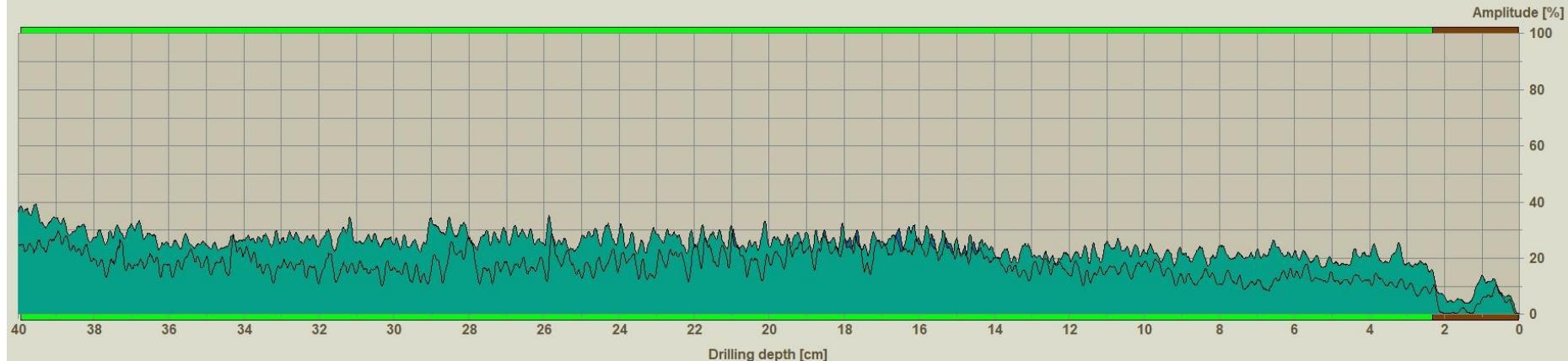
**Assessment**

From 0,02 cm to 2,45 cm : Bark  
From 2,45 cm to 39,93 cm : Sound wood

**Comment**

**Measuring / object data**

Measurement no.:	24	Speed :	2500 r/min	Diameter:
ID number	Oak1mSE	Needle state:	---	Level :
Drilling depth	40.05 cm	Tilt	---	Direction:
Date	23.07.2025	Offset	63 / 270	Species :
Time	10:36:58	Avg. curve	off / off	Location:
Feed	50 cm/min			Name :



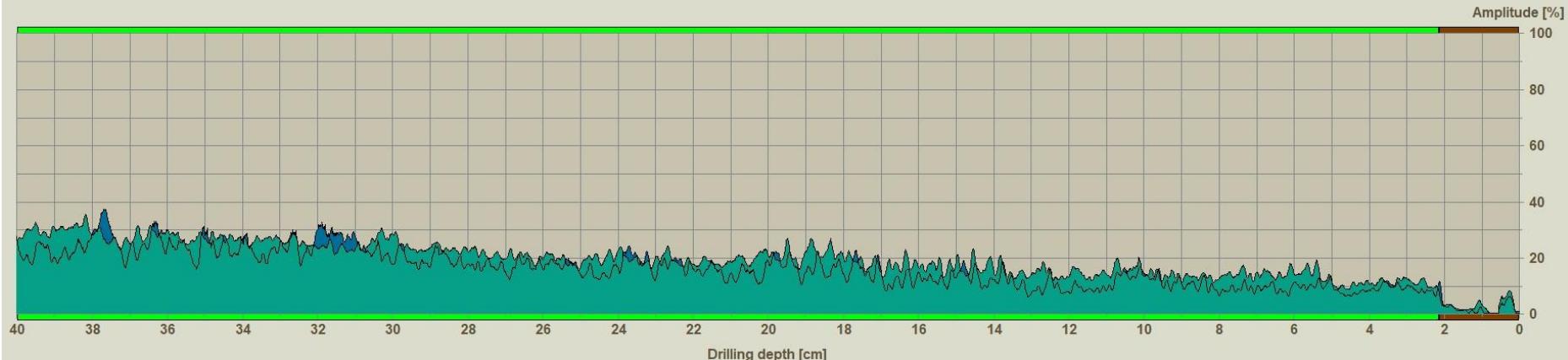
**Assessment**

  From 0,02 cm to 2,33 cm : Bark  
  From 2,33 cm to 39,95 cm : Sound wood

**Comment**

**Measuring / object data**

Measurement no.:	25	Speed :	2500 r/min	Diameter:	
ID number	Oak 1m S	Needle state:	---	Level :	
Drilling depth	40,05 cm	Tilt :	---	Direction:	
Date	23.07.2025	Offset :	64 / 285	Species :	
Time	10:38:48	Avg. curve :	off / off	Location:	
Feed	50 cm/min			Name :	



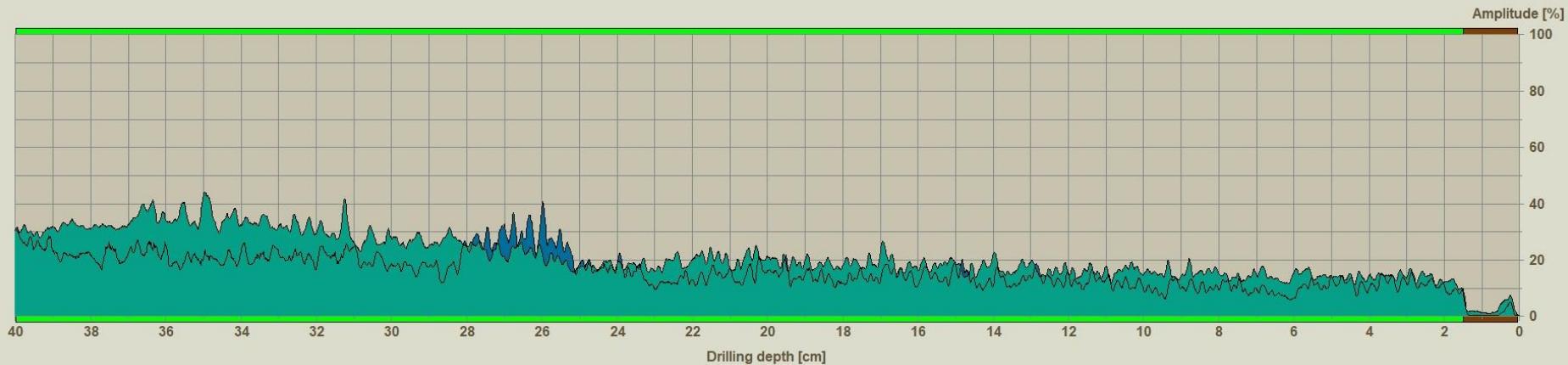
**Assessment**

From 0,02 cm to 2,13 cm : Bark  
From 2,17 cm to 40,00 cm : Sound wood

**Comment**

**Measuring / object data**

Measurement no.:	26	Speed :	2500 r/min	Diameter:
ID number:	Oak1mSW	Needle state:	—	Level :
Drilling depth:	40,06 cm	Tilt:	—	Direction:
Date:	23.07.2025	Offset:	66 / 275	Species:
Time:	10:40:12	Avg. curve:	off / off	Location:
Feed:	50 cm/min			Name:



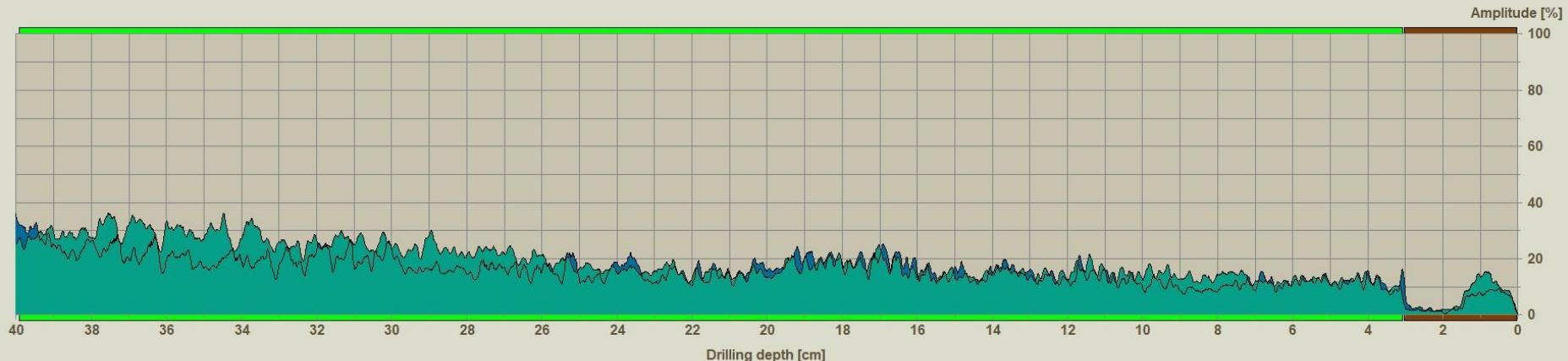
**Assessment**

From 0,05 cm to 1,53 cm : Bark  
From 1,51 cm to 39,98 cm : Sound wood

**Comment**

**Measuring / object data**

Measurement no.:	27	Speed :	2500 r/min	Diameter:
ID number	Oak 1m W	Needle state:	---	Level :
Drilling depth	40,06 cm	Tilt :	---	Direction:
Date	23.07.2025	Offset :	63 / 294	Species :
Time	10:41:27	Avg. curve :	off / off	Location:
Feed	50 cm/min			Name :



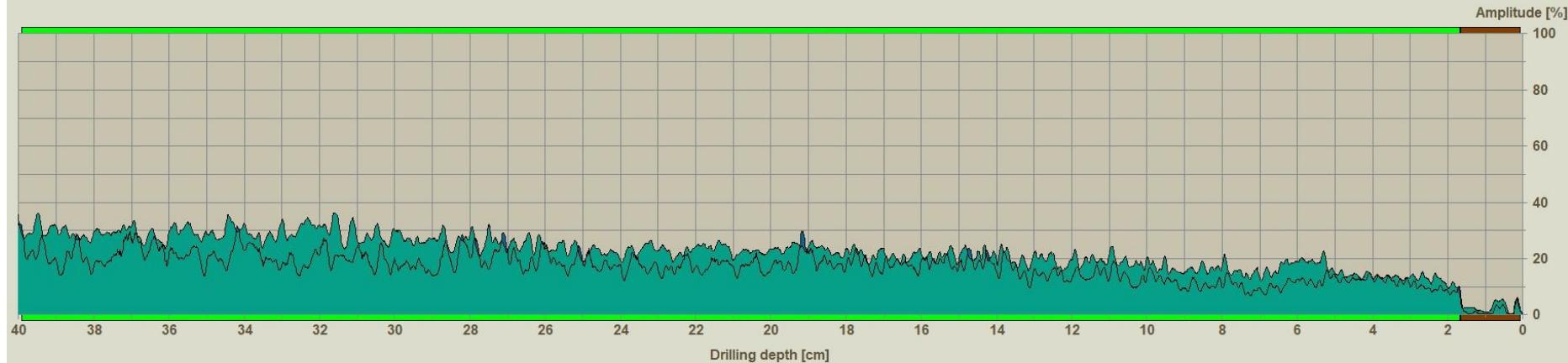
**Assessment**

  From 0,02 cm to 3,04 cm : Bark  
  From 3,07 cm to 39,93 cm : Sound wood

**Comment**

**Measuring / object data**

Measurement no.:	28	Speed :	2500 r/min	Diameter:
ID number	Oak 1m NW	Needle state:	---	Level :
Drilling depth	40,05 cm	Tilt	---	Direction:
Date	23.07.2025	Offset	61 / 301	Species :
Time	10:42:53	Avg. curve	off / off	Location:
Feed	50 cm/min			Name :



**Assessment**

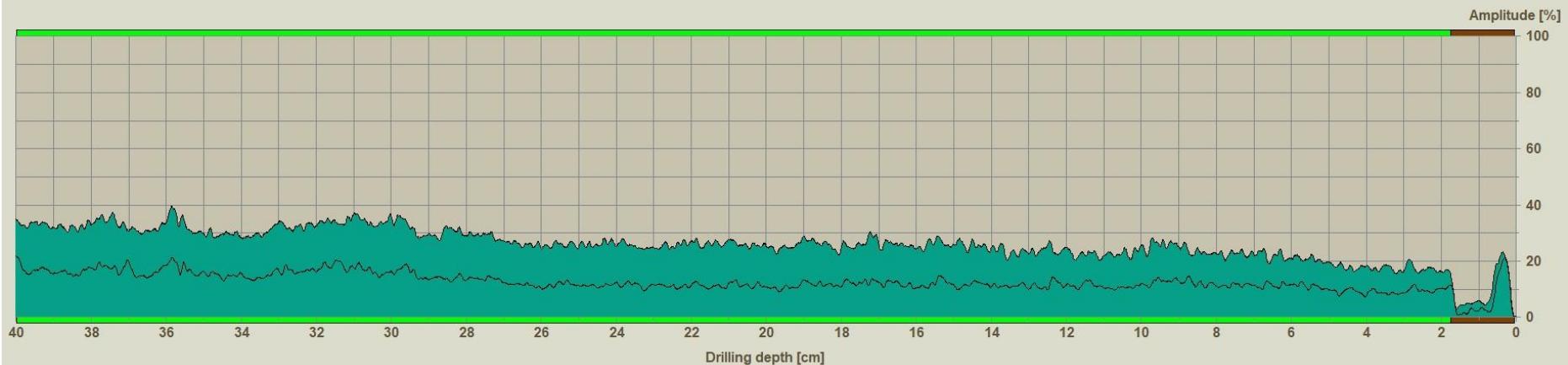
From 0,07 cm to 1,67 cm : Bark  
From 1,69 cm to 39,93 cm : Sound wood

**Comment**

### Horse Chestnut T52

#### Measuring / object data

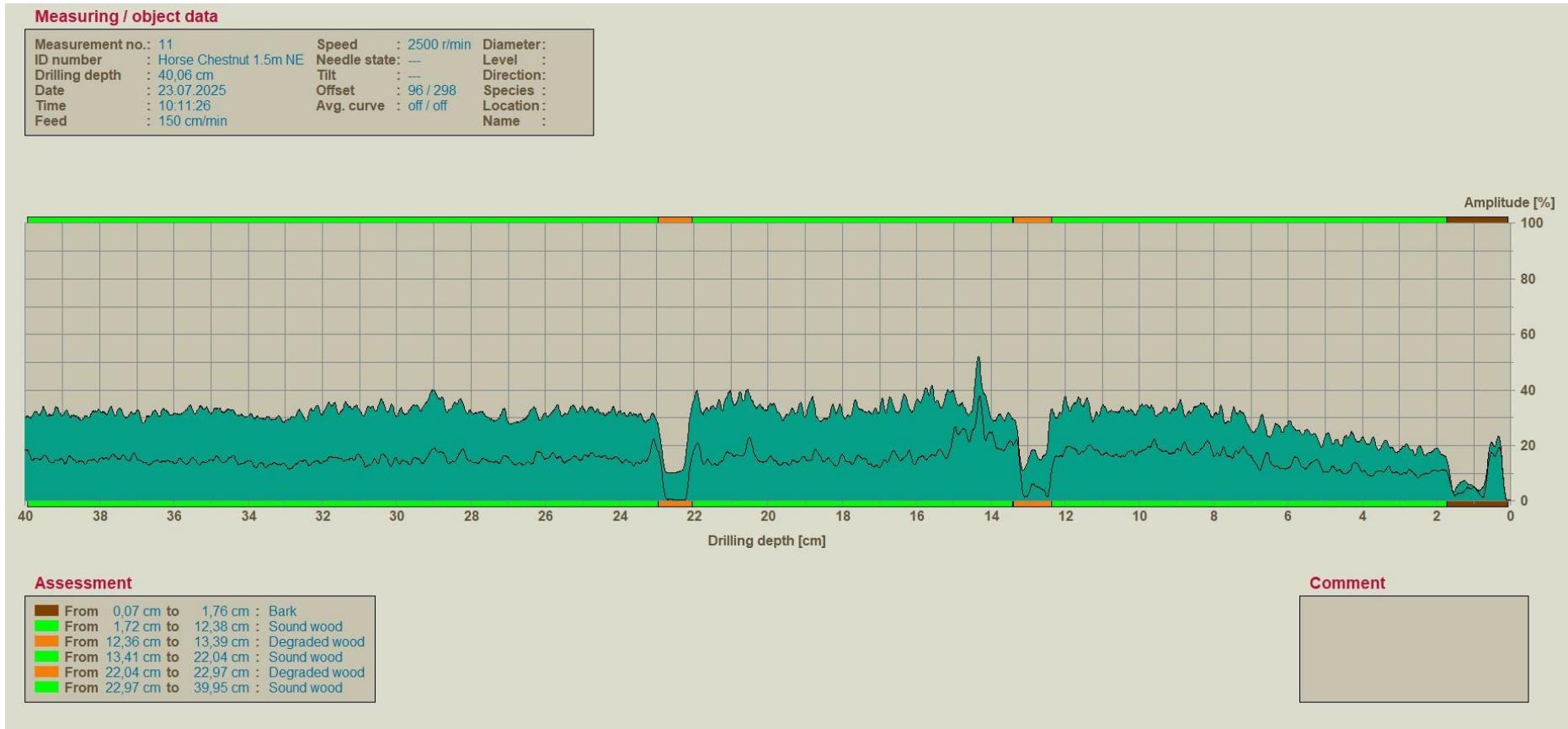
Measurement no.:	10	Speed :	2500 r/min	Diameter:
ID number :	Horse Chestnut 1.5m N	Needle state:	---	Level :
Drilling depth :	40,05 cm	Tilt :	---	Direction:
Date :	23.07.2025	Offset :	99 / 293	Species :
Time :	10:10:47	Avg. curve :	off / off	Location:
Feed :	150 cm/min			Name :



#### Assessment

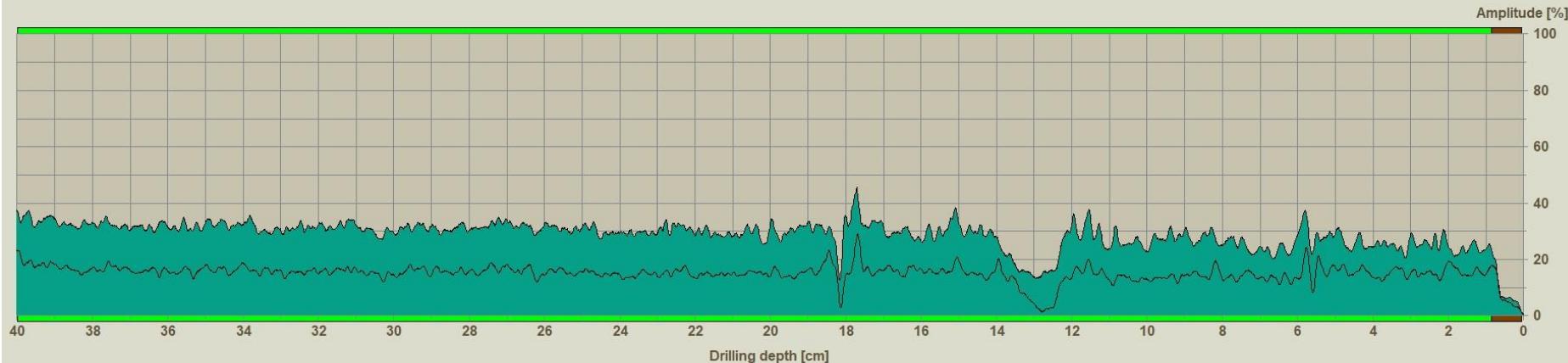
From 0,05 cm to 1,76 cm :	Bark
From 1,74 cm to 40,00 cm :	Sound wood

#### Comment



**Measuring / object data**

Measurement no.:	12	Speed :	2500 r/min	Diameter:	
ID number	Horse Chestnut 1.5m EE	Needle state:	--	Level :	
Drilling depth	40,05 cm	Tilt :	--	Direction:	
Date	23.07.2025	Offset :	91 / 297	Species :	
Time	10:12:06	Avg. curve :	off / off	Location:	
Feed	150 cm/min			Name :	



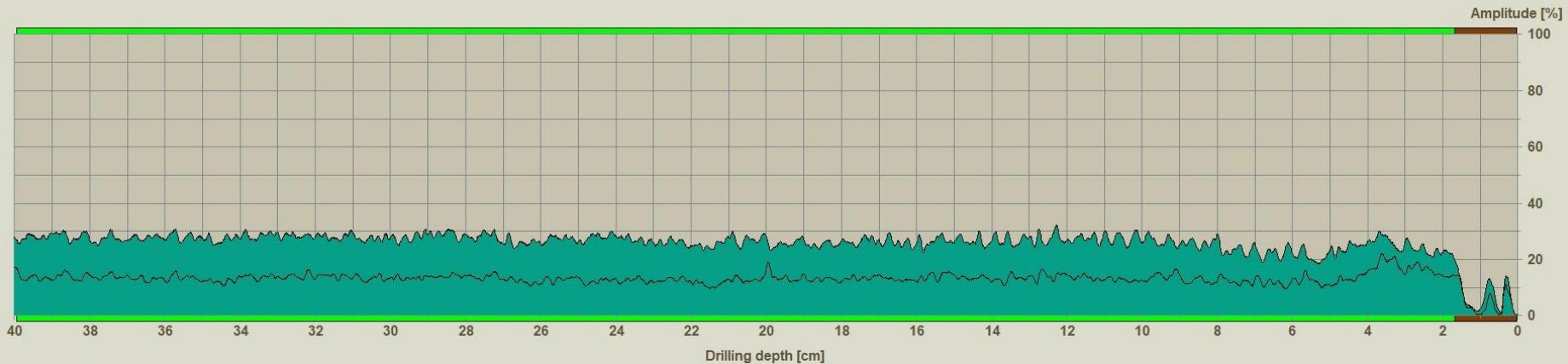
**Assessment**

From 0,05 cm to 0,89 cm : Bark  
From 0,85 cm to 39,98 cm : Sound wood

**Comment**

**Measuring / object data**

Measurement no.:	13	Speed :	2500 r/min	Diameter:
ID number	: Horse Chestnut 1.5m E	Needle state:	--	Level :
Drilling depth	: 40,05 cm	Tilt	: --	Direction:
Date	: 23.07.2025	Offset	: 90 / 294	Species :
Time	: 10:13:17	Avg. curve	: off / off	Location:
Feed	: 150 cm/min			Name :



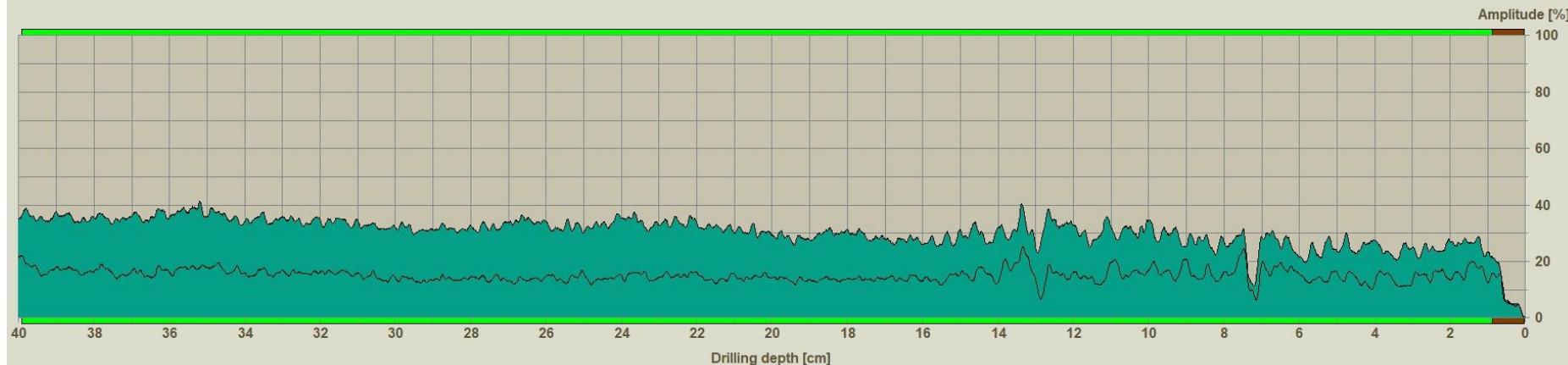
**Assessment**

From 0,02 cm to 1,69 cm :	Bark
From 1,69 cm to 39,95 cm :	Sound wood

**Comment**

**Measuring / object data**

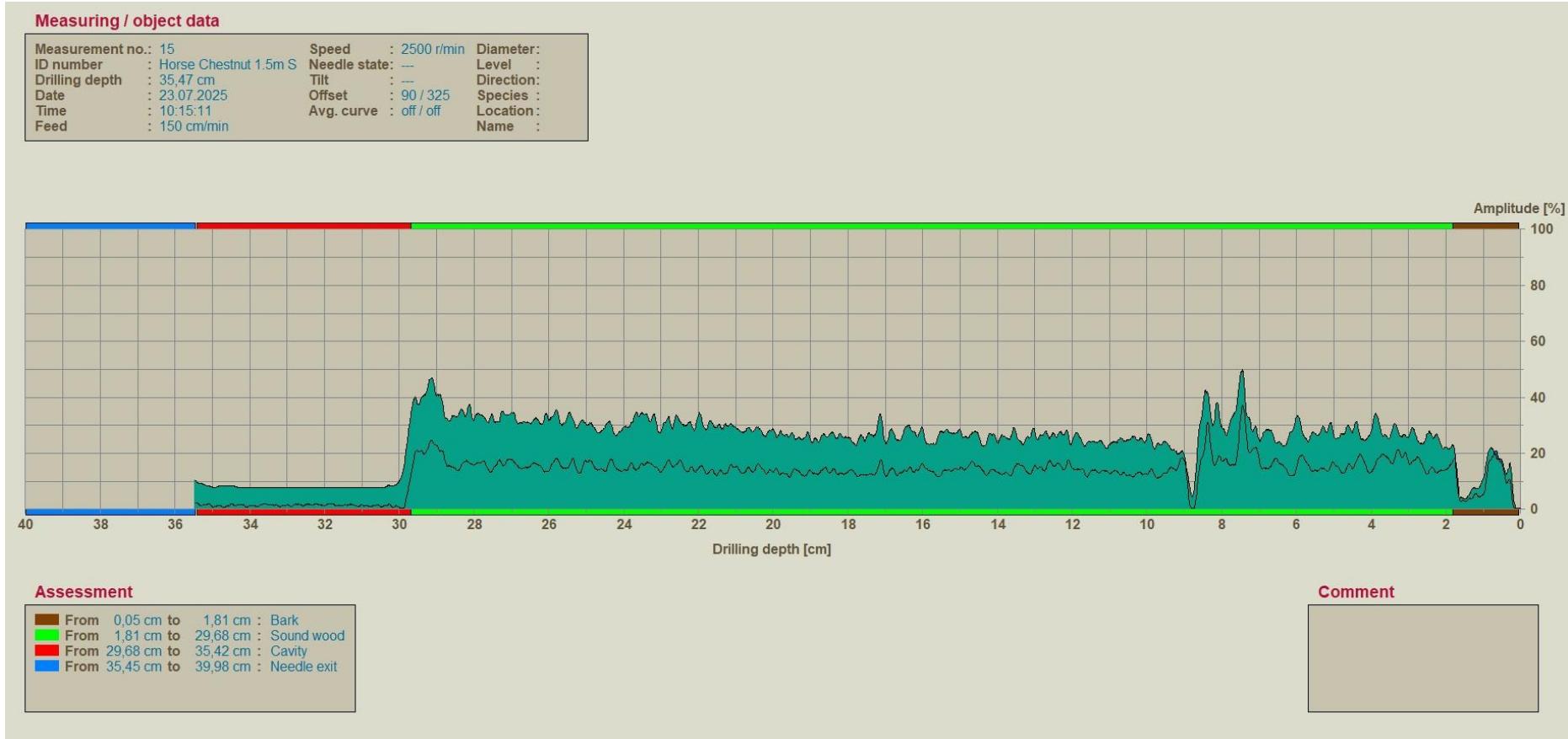
Measurement no.:	14	Speed :	2500 r/min	Diameter:
ID number	Horse Chestnut 1.5m SE	Needle state:	--	Level :
Drilling depth	40.05 cm	Tilt :	--	Direction:
Date	23.07.2025	Offset :	91 / 305	Species :
Time	10:14:32	Avg. curve :	off / off	Location:
Feed	150 cm/min			Name :



**Assessment**

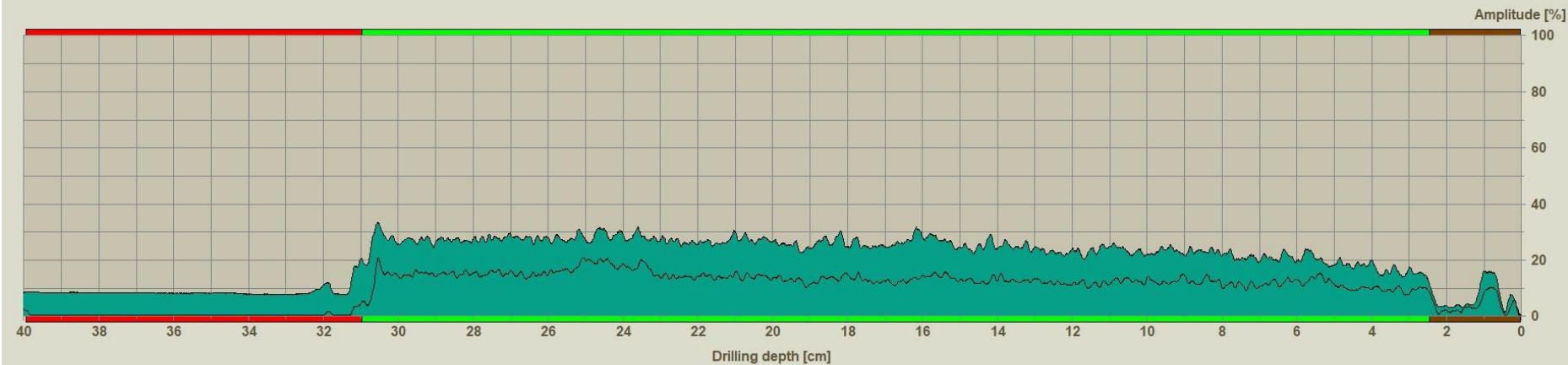
From 0,02 cm to 0,87 cm : Bark  
From 0,89 cm to 39,93 cm : Sound wood

**Comment**



**Measuring / object data**

Measurement no.:	16	Speed :	2500 r/min	Diameter:
ID number	Horse Chestnut 1.5m NW	Needle state:	--	Level:
Drilling depth	40,04 cm	Tilt	--	Direction:
Date	23.07.2025	Offset	95 / 329	Species:
Time	10:18:05	Avg. curve	off / off	Location:
Feed	150 cm/min			Name:



**Assessment**

- From 0,02 cm to 2,49 cm : Bark
- From 2,45 cm to 31,01 cm : Sound wood
- From 30,98 cm to 39,95 cm : Cavity

**Comment**