# Tree inspection &
# Decay detection Report

Lombardy poplar tree

10 Fitzroy Park
London
N6 6HU

TIM MOYA ASSOCIATES

# PiCUS Sonic Tomogram Report

TIM MOYA ASSOCIATES

**Tree No.:** 1 **Species:**
*Populus nigra 'Italica'*
(Lombardy Poplar)

## Tree Details

Age Class: Late Mature.

Height (m): 29

Spread (m): 10

Diameter at 1.5m (m): 139

Number of stems: 1

Vitality: Moderate.

Physiological Condition: Fair.

Structural Condition: Poor.

Access to tree: Fair.

Surveyor: James Chambers

Test performed on:
18/04/2018

## Conditions

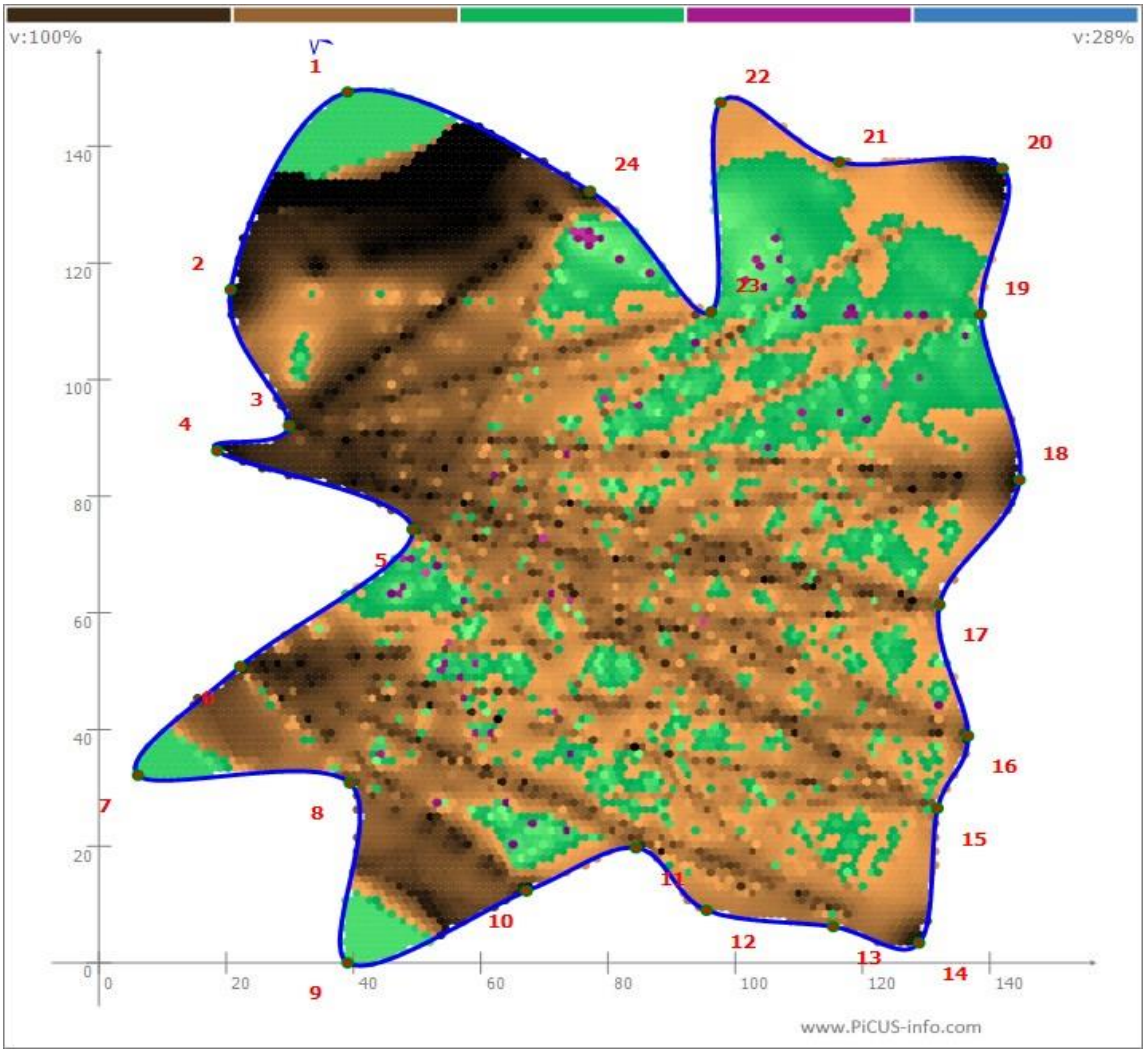
- Buttresses / buttress roots - Major adaptive growth / strong development.
- Crown reduction - Historic.
- Deadwood - Major.
- Decline - Suspected.
- Epicormic growth - Crown.
- Leaning trunk - Minor.
- Root decay - Suspected.
- Suppressed crown - Major.
- Unbalanced crown - Major.

## Targets

- Building within falling distance of tree.
- Neighbouring property in falling distance.
- Recreational area within falling distance.

## Comments

Surveyor's Note: Unbalanced crown due to neighbouring tree which failed recently.
Sounding mallet test - hollowing suspected in buttresses to the north and 'rib' to the west (by mp4)
Root decay suspected following historic topping.




**PiCUS sonic tomogram at approximately 15cm above ground level**

## Interpretation of test

The PiCUS tomogram shows wood which is in the early stages of decay (light brown, green) across the stem at the test height, as indicated in the scale at the top of the tomogram.

The shape of the tomogram is due to the extensive buttress root formation at the base of the tree, which not only made measuring the sensor positions difficult but may have had some effect on the recorded speeds where sound waves had to travel to and from measuring points (mp) out on the tips of the buttresses.

For this reason, the RESI PD Resistograph was used to confirm these results with a selection of tests around the lower stem, to compare wood consistency.

The RESI PD results (below) confirm the early development of decay across the stem, which, along with the alterations in wind dynamics due to the recent failure of the neighbouring tree, mean that the tree is in weakened condition and remedial tree works are required. Recommendations follow below.

The tree is subject to a Tree Preservation Order (TPO) so permission *must* be obtained from the local authority prior to any tree works being undertaken.

# Picture of Defect



**The base of the tree from the north, with the PiCUS equipment set up**

# Picture of Defect



**The neighbouring tree which failed recently. It should be noted that the fallen tree had also been topped and failed at the base.**

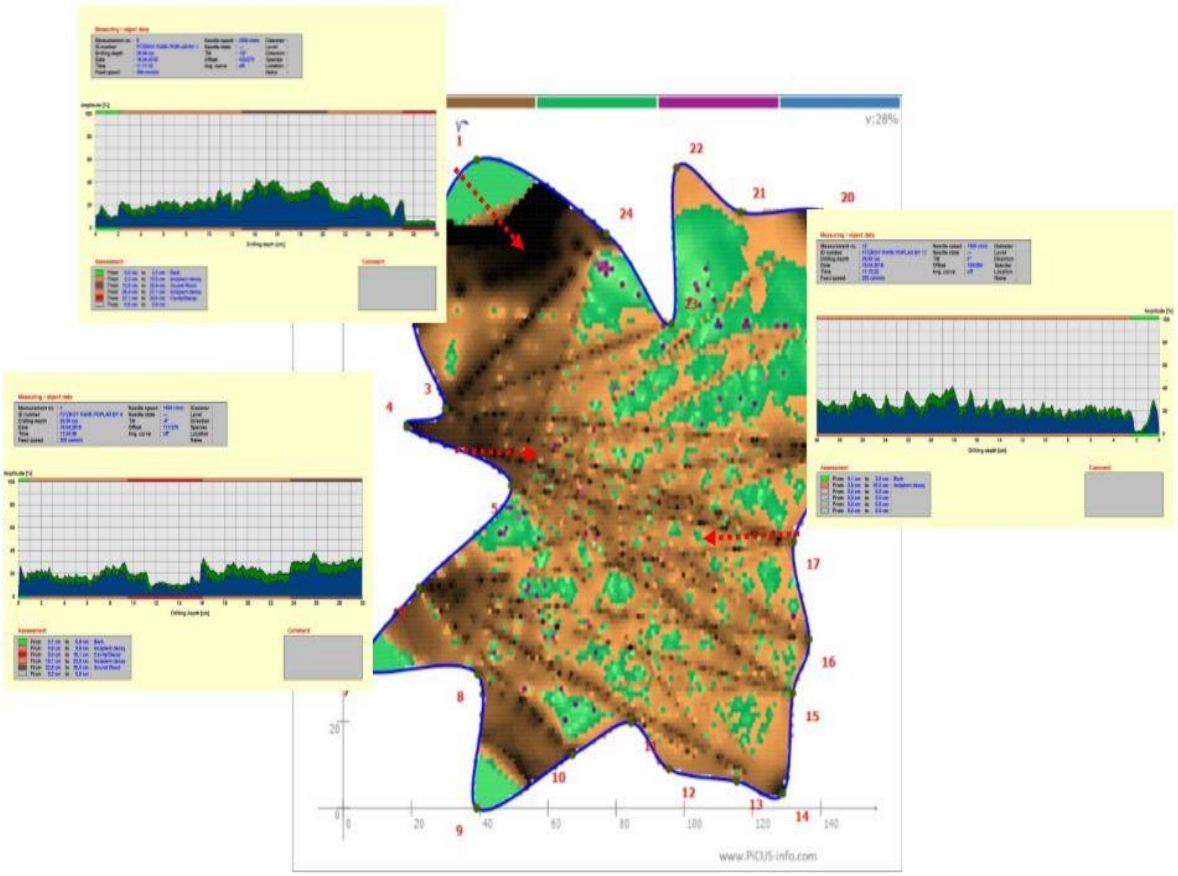
# Picture of Defect



**The rib formation at mp 4, which sounded hollow following tap tests**

# RESI PD Reading

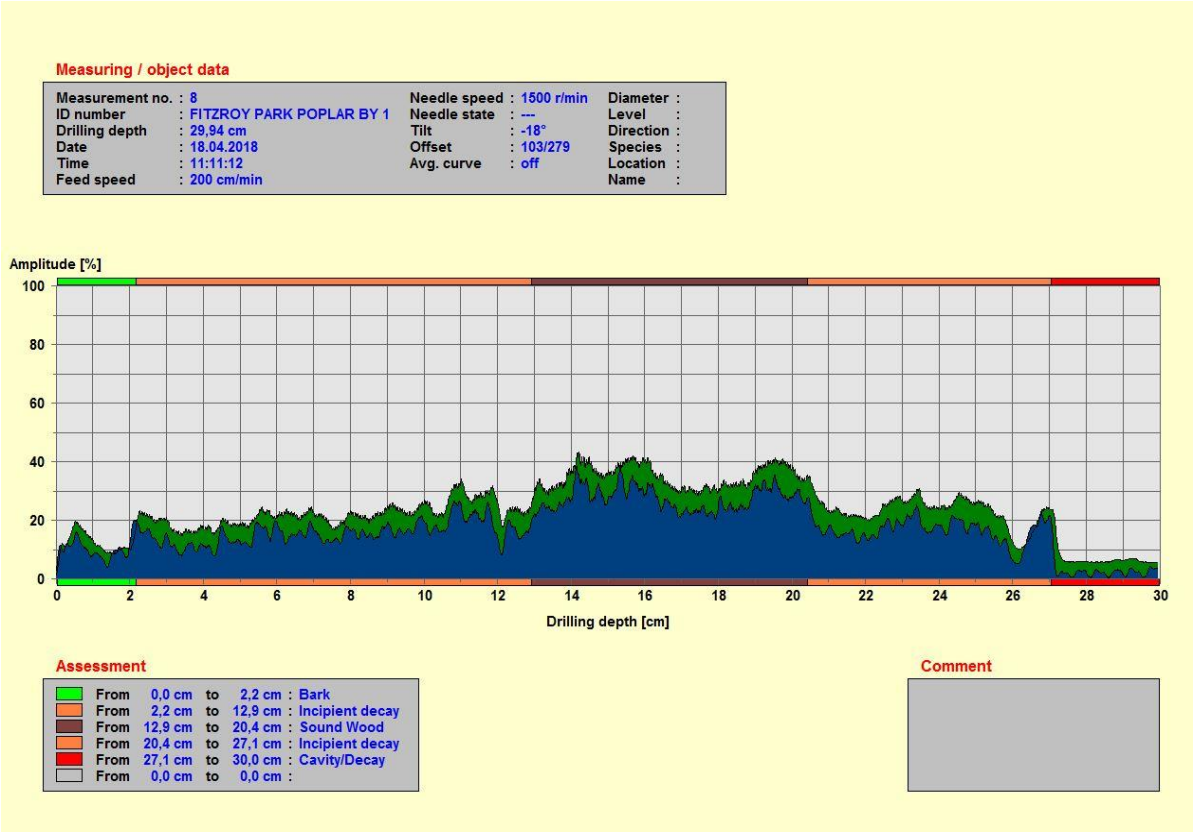





**RESI PD drill traces overlaid in their approximate positions on the PiCUS tomogram**

# RESI PD Reading

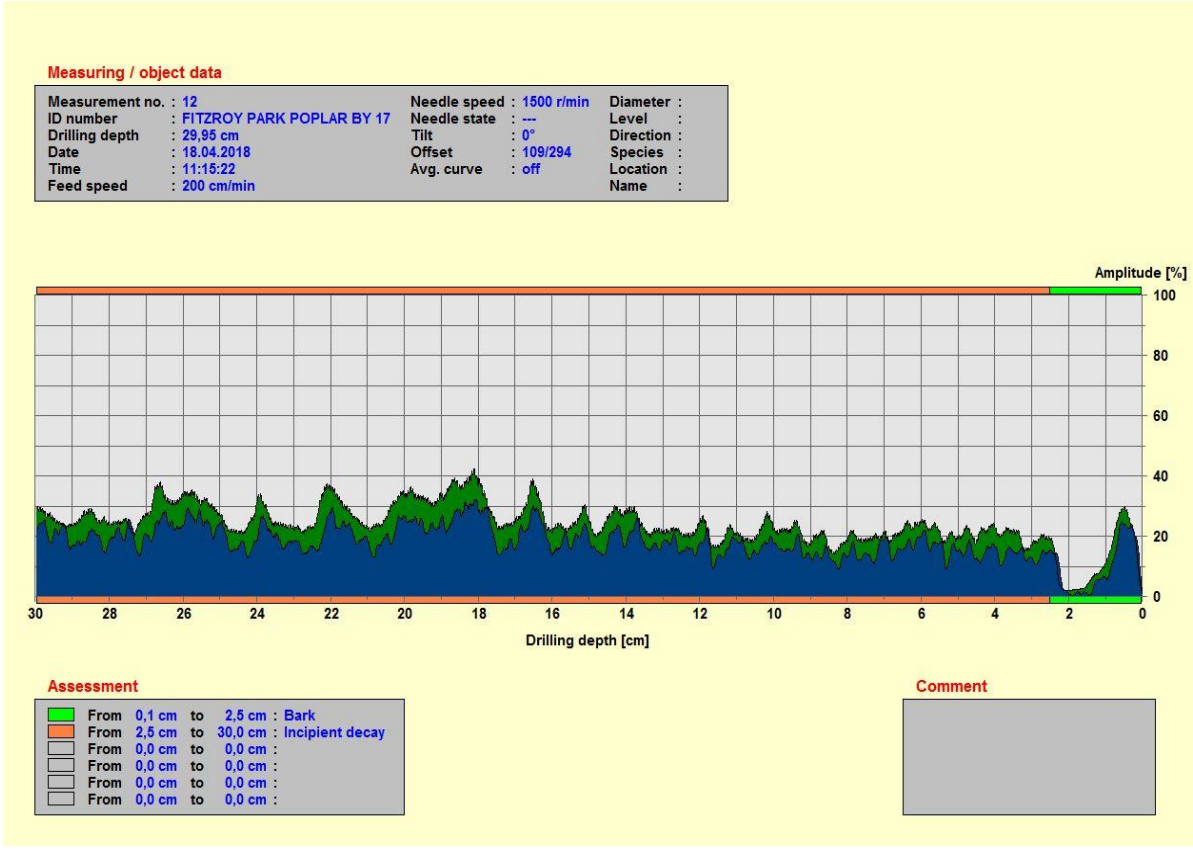
TIM MOYA ASSOCIATES




**RESI PD Drill trace (read from left to right) by mp 1 showing incipient (early stage) decay between 2cm and 13cm, sound wood between 13cm and 20cm where incipient decay and decay follows**

# RESI PD Reading

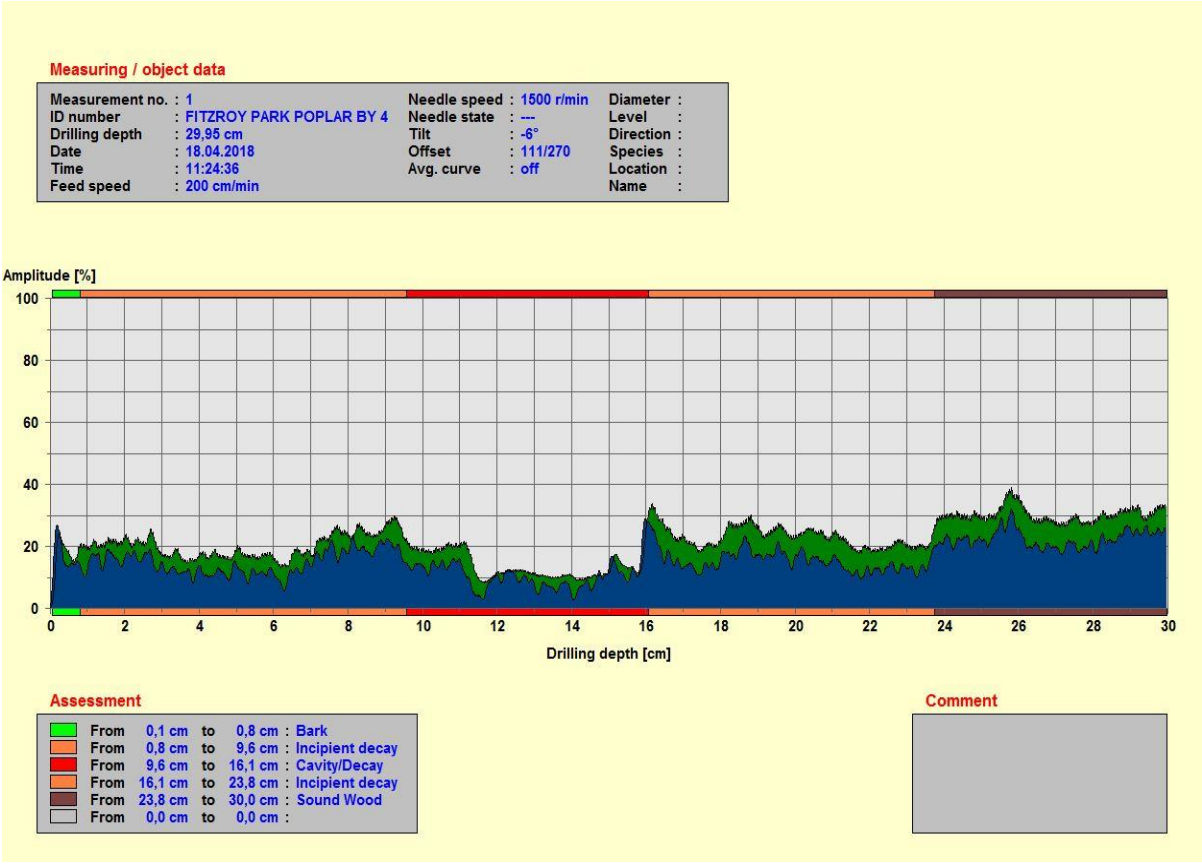
TIM MOYA ASSOCIATES




**RESI PD Drill trace (read from right to left) by mp 17 showing incipient (early stage) decay from 2.5cm onward**

# RESI PD Reading

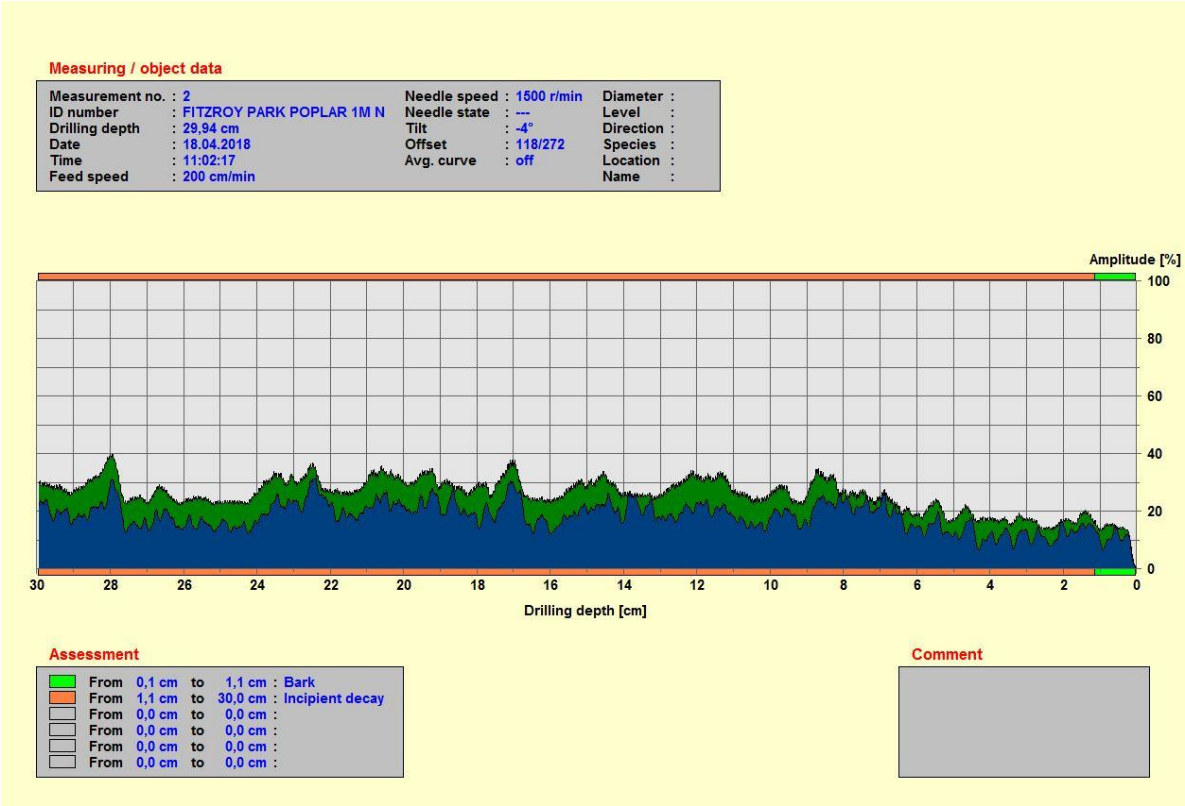
TIM MOYA ASSOCIATES




**RESI PD Drill trace (read from left to right) by mp 4 showing incipient decay to approximately 9.5cm then a small pocket of more advanced decay until 16cm, where incipient decay continues until sound wood at 24cm.**

# RESI PD Reading

TIM MOYA ASSOCIATES



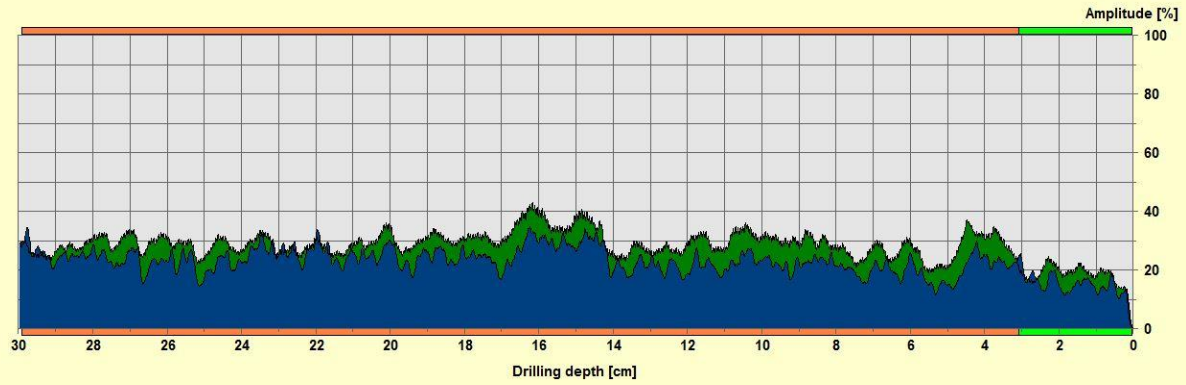

**RESI PD Drill trace (read from right to left) at approximately 1m above ground level to the north, showing incipient decay from 2cm to 30cm**

# RESI PD Reading

TIM MOYA ASSOCIATES

**Measuring / object data**

| | | | | | |
|---|---|---|---|---|---|
| Measurement no. | : 7 | Needle speed | : 1500 r/min | Diameter | : |
| ID number | : FITZROY PARK POPLAR 1M W | Needle state | : --- | Level | : |
| Drilling depth | : 29,96 cm | Tilt | : -6° | Direction | : |
| Date | : 18.04.2018 | Offset | : 109/275 | Species | : |
| Time | : 11:10:22 | Avg. curve | : off | Location | : |
| Feed speed | : 200 cm/min | | | Name | : |




**Assessment**

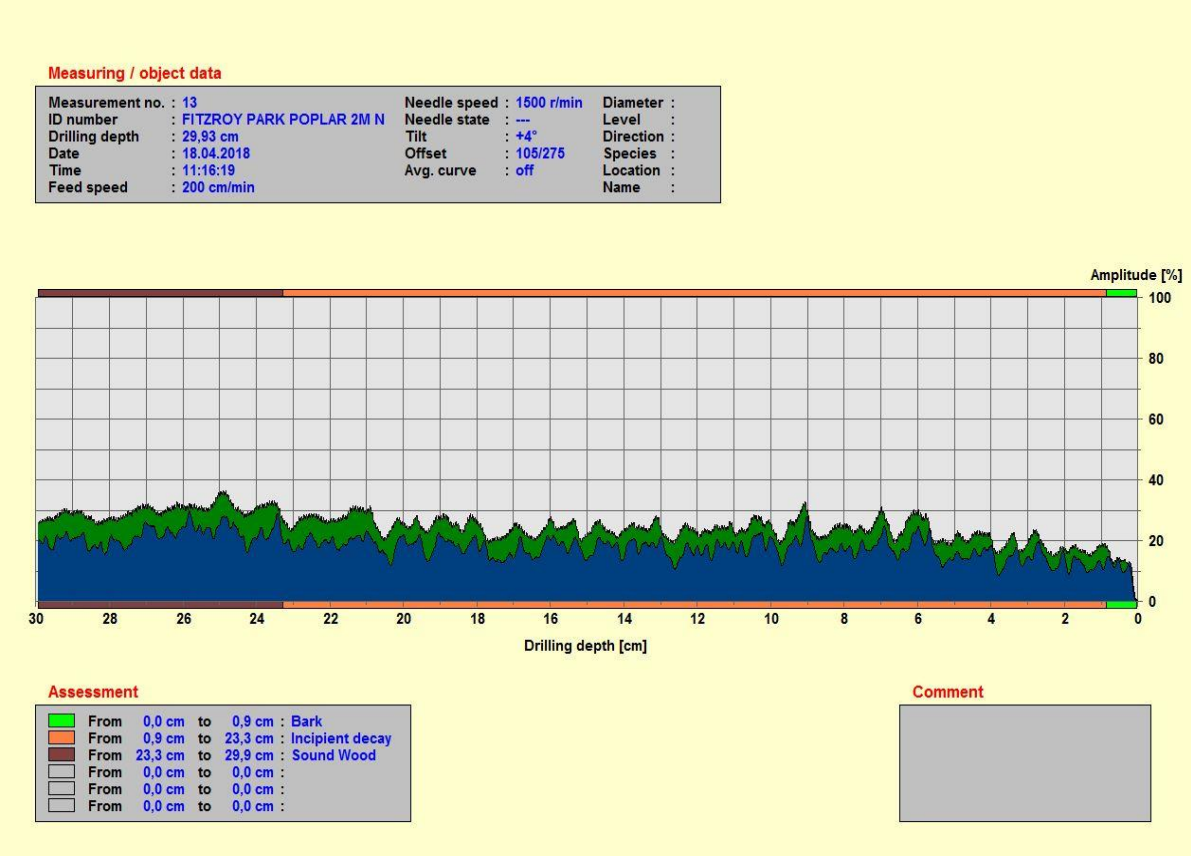
| | | | | | |
|---|---|---|---|---|---|
| From | 0,0 cm | to | 3,1 cm | : | Bark |
| From | 3,1 cm | to | 29,9 cm | : | Incipient decay |
| From | 0,0 cm | to | 0,0 cm | : | |
| From | 0,0 cm | to | 0,0 cm | : | |
| From | 0,0 cm | to | 0,0 cm | : | |
| From | 0,0 cm | to | 0,0 cm | : | |

**Comment**

**RESI PD Drill trace (read from right to left) at approximately 1m above ground level to the west, showing incipient decay from 2cm to 30cm**

# RESI PD Reading

TIM MOYA ASSOCIATES




**RESI PD Drill trace (read from right to left) at approximately 2m above ground level showing incipient decay between 1cm and 23cm where sound wood continues to 30cm**

# Recommendations

TIM MOYA ASSOCIATES

| | |
|---|---|
| Fell tree to ground level due to poor structural condition, with deteriorating wood condition in stem and base and probable root decay – works recommended to remove risk of tree failure on to neighbouring property and recreational features near the tree | Within 6 months. |
| Plant replacement tree nearby in the following winter (early) – recommend *Styphnolobium japonica* – Pagoda tree | 1 year. |


10 Fitzroy Park, London, N6 6HU

- Feasibility Tree Surveys
- British Standard 5837 Tree Surveys
- Tree Constraints Reports & Drawings
- Appeal Statements & Proofs
- Expert Witness
- Evidence at Hearings & Public Inquiries
- Method Statements to Satisfy Planning Conditions
- Design Solutions
- Landscape Plans
- Tender Documents & Drawings
- Supervision & Inspection of Works
- Contract & Project Management
- Health & Safety Surveys
- GPS Surveys
- Computerised Tree Population Surveys
- CAD Plans & Consultancy
- Subsidence Risk Assessments
- Mortgage & Insurance Reports
- TPO Review
- Local Government Officer Contracts
- Arboricultural & Ecological Reports for Planning
- Habitat Surveys (Extended Phase 1/Walkover/ Botanical)
- Protected Species Surveys
- Ecological Mitigation & Licencing
- BREEAM & CFSH
- Ecological Management Plans
- Hedgerow Surveys
- Landscape Analysis

**TIM MOYA ASSOCIATES**
**ARBORICULTURE • LANDSCAPE • ECOLOGY**

The Barn, Feltimores Park, Chalk Lane,
Harlow, Essex CM17 0PF

T: 0845 094 3268
F: 0845 094 3269
W: www.timmoyaassociates.co.uk