


Landmark Trees

FURTHER INVESTIGATION REPORT:

14 Greenaway Gardens
London
NW3 7DH

REPORT PREPARED FOR:


14 Greenaway Gardens
London
NW3 7DH

REPORT PREPARED BY

Adam Hollis
MSc ARB MICFor FARbor A MRICS C Env

Ref: DKS/14GWY/RSG/01

Date: 8th December 2022

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Web: www.landmarktrees.co.uk
e-mail: info@landmarktrees.co.uk
Tel: 0207 851 4544

London Office: Holden House, 4th Floor, 57 Rathbone Place London W1T 1JU

Registered Office: 15 Abbey Road, Oxford OX2 0AD

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Site Details

Site Address: 14 Greenaway Gardens, London NW3 7DH

Client / Agent: [REDACTED]

Surveyor: Kim Dear

Date of Inspection: 9th November 2022

Instruction

Carry out decay detection tests on the main stem of one English oak (T29) within the rear garden of 14 Greenaway Gardens.

Resistograph Tests

The Resistograph is a drilling instrument that probes the tree with a micro-drill with a 3mm tip and a 1.5mm x 400mm shaft; this allows testing to a depth of 40cm. As the probe advances it measures the resistance encountered and feed rate of the needle. Undecayed wood gives a high reading whilst dysfunctional wood or cavities give a lower reading.

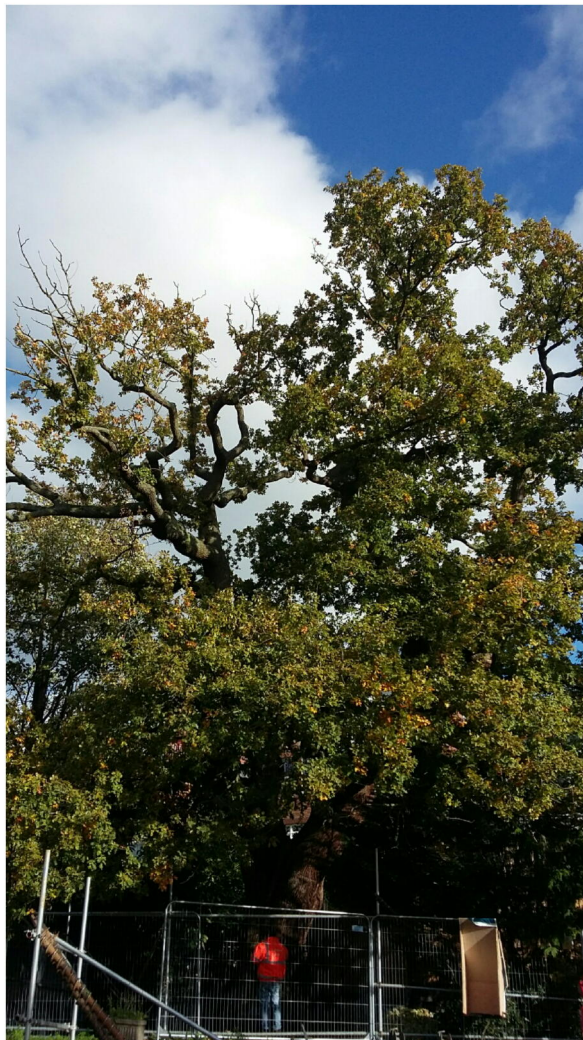
The instrument used was the IML Resistograph PD400 which a greater capability than earlier models. There are 5 different speed settings and the data is recorded electronically. The readings show the measured resistance as a black line and the feed rate of the needle as a blue colour. It is useful to have the 2 settings as with previous models, friction on the needle could give a falsely high reading. Although there is still friction on the needle with the PD400 the feed rate will change as decay is encountered. This is depicted on the traces shown below.

Tree Details

Species: English oak (*Quercus robur*)

Diameter: 1440mm

Height: 13m



Photograph 1: T29



Photograph 2: T29 lower crown with cavities front on / from SW



Photograph 3: T29 lower crown with cavities from rear NE

Observations

This mature tree is situated 6m from the north eastern boundary of the property. The crown to the west is sparse with significant deadwood and dieback. There are pruning wounds throughout from deadwood clearance performed last year. There is an open cavity 15cm diameter at ground level to the south west. Although not currently visible, Honey Fungus (*Armillaria mellea*) has been reported around the south west of the stem. Further fungal remnants are visible (Photo 2), most likely of *Pseudoinonotus dryadeus*. At 7m to the east further fungal remains are visible erupting from a pruning wound, most likely *Laetiporus sulphureus*.

On the ascending co-dominant stem to the west is an open cavity 2m in length that resembles a hammock, with little residual sound wood.

Results

Table 1: Findings of testing undertaken

Direction	Height	Results
North	3.5m	4.88-31.63cm good wood, 31.63-39.87cm - Cavity
North East	30cm	3.26-39.90cm good wood
East	30cm	1.26-39.94cm good wood
South Southeast	30cm	2.58-39.90cm good wood
South	30cm	2.52-34.64cm good wood, 34.64-39.26cm crack, 39.26-39.90cm good wood
West	30cm	1.07-15.51cm good wood, 15.51-26.24cm cavity
North West	30cm	1.49-18.55cm good wood, 18.55-22.58cm crack, 22.58-39.90cm good wood

The individual traces are provided for reference within Appendix 1.

Discussion

The testing undertaken at the north, west and south of the tree's stem at a height of 30cm above ground level all show significant decay is present. The test performed at 3.5m above ground adjacent to the fungal remains in the eastern stem, shows a crack or decay at 35cm depth.

The ascending eastern stem that extends over the boundary fence and neighbouring garden has fungal remains in a pruning wound/cavity at 7m above ground.

That the tree has died back relatively significantly since the previous deadwooding operation indicates it remains under physiological stress. I would consider this most likely to be the result of root dysfunction arising as a result of colonisation by the previously observed honey fungus. In my experience, ongoing decline such as this over a relatively short period indicates a significant imbalance in the root : shoot ratio and I would consider further decline very likely. Whilst I hesitate at this juncture to confidently assert that the decline is terminal, I would estimate the remaining safe useful life expectancy of the tree as less than 10 years.

Recommendations

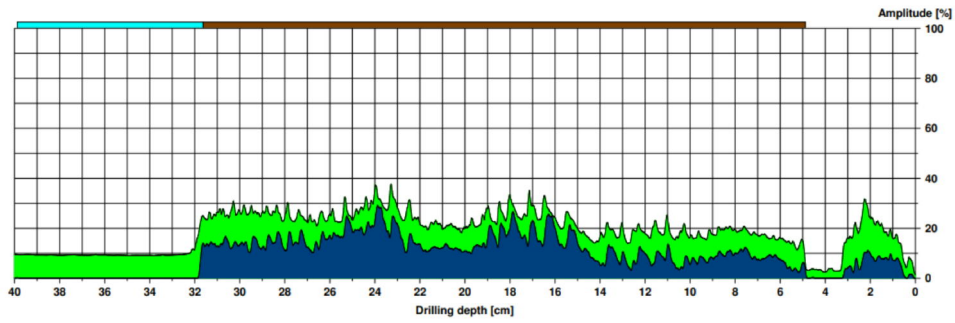
Remove upper / outer deadwood and reduce live crown by approximately 3-4m. Please note that this recommendation is made upon the assumption of a client preference to retain the tree. Continue to monitor ongoing health of tree with annual inspections.

Appendix 1

RESISTOGRAPH TRACES

Measuring / object data

Measurement no.:	1	Speed	: 2500 r/min	Diameter:	144.00 cm
ID number	: 14 GREENWAY OAK 30 cm N	Needle state:	---	Level	: 30
Drilling depth	: 40.07 cm	Tilt	---	Direction:	North
Date	: 09.11.2022	Offset	: 124 / 287	Species	: Oak
Time	: 12:14:54	Avg. curve	: off / off	Location	: 14. Greenway Gdns
Feed	: 100 cm/min	Name	: Kim Dear		



Assessment

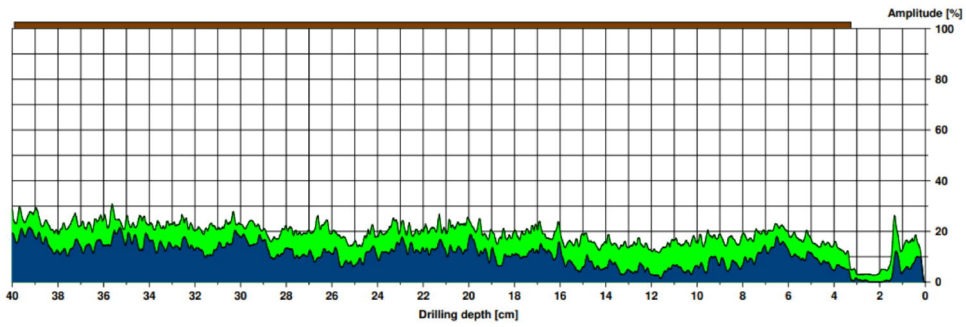
From	4.88 cm	to	31.63 cm	:	Good Wood
From	31.63 cm	to	39.87 cm	:	Cavity

Comment

14 GREENWAY OAK 30 cm NM001

Measuring / object data

Measurement no.:	6	Speed	: 2500 r/min	Diameter:	144,00 cm
ID number	: 14 GREENAWAY OAK 30 cm NE	Needle state:	---	Level	: 30
Drilling depth	: 40,07 cm	Tilt	: ---	Direction:	Northeast
Date	: 09.11.2022	Offset	: 97 / 272	Species	: Oak
Time	: 12:26:57	Avg. curve	: off / off	Location	: 14, Greenway Gdns
Feed	: 100 cm/min			Name	: Kim Dear



Assessment

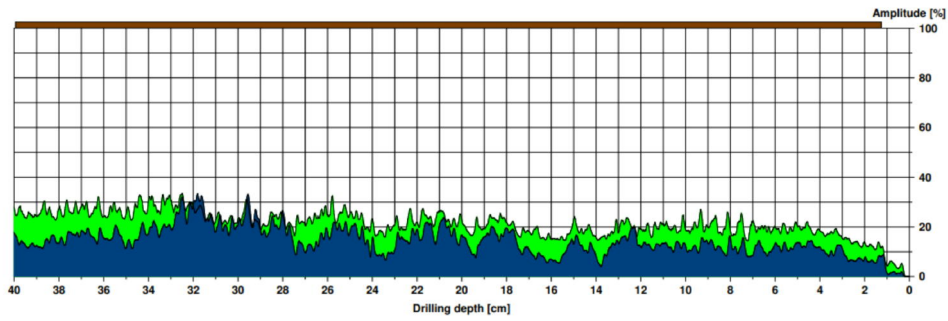
From 3,26 cm to 39,90 cm : Good Wood

Comment

14 GREENAWAY OAK 30 cm NEM006

Measuring / object data

Measurement no.:	5	Speed	: 2500 r/min	Diameter:	144,00 cm
ID number	: 14 GREENAWAY OAK 30 cm E	Needle state:	---	Level	: 30
Drilling depth	: 40,07 cm	Tilt	: ---	Direction	: East
Date	: 05.11.2022	Offset	: 95 / 284	Species	: Oak
Time	: 12:25:47	Avg. curve	: off / off	Location	: 14, Greenway Gdns
Feed	: 100 cm/min			Name	: Kim Dear



Assessment

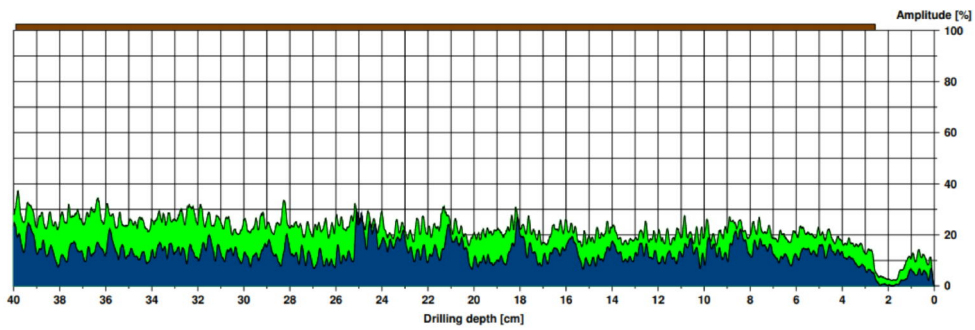
From 1,26 cm to 39,94 cm : Good Wood

Comment

14 GREENAWAY OAK 30 cm EM005

Measuring / object data

Measurement no.:	9	Speed	: 2500 r/min	Diameter:	144,00 cm
ID number	: 14 GREENAWAY OAK 3.5M SSE	Needle state:	--	Level	: 30
Drilling depth	: 40,05 cm	Tilt	: --	Direction:	South southeast
Date	: 09.11.2022	Offset	: 110 / 282	Species	: Oak
Time	: 12:39:39	Avg. curve	: off / off	Location	: 14, Greenway Gdns
Feed	: 100 cm/min			Name	: Kim Dear



Assessment

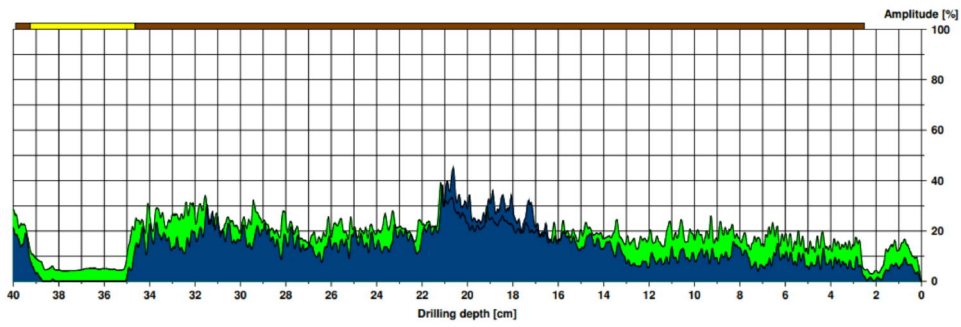
From 2.58 cm to 39.90 cm : Good Wood

Comment

14 GREENAWAY OAK 3.5M SSEM009

Measuring / object data

Measurement no.:	8	Speed	: 2500 r/min	Diameter:	144,00 cm
ID number	: 14 GREENAWAY OAK 3.5M S	Needle state:	---	Level	: 30
Drilling depth	: 40,06 cm	Tilt	: --	Direction:	South
Date	: 09.11.2022	Offset	: 105 / 262	Species	: Oak
Time	: 12:36:57	Avg. curve	: off / off	Location	: 14, Greenway Gdns
Feed	: 100 cm/min			Name	: Kim Dear



Assessment

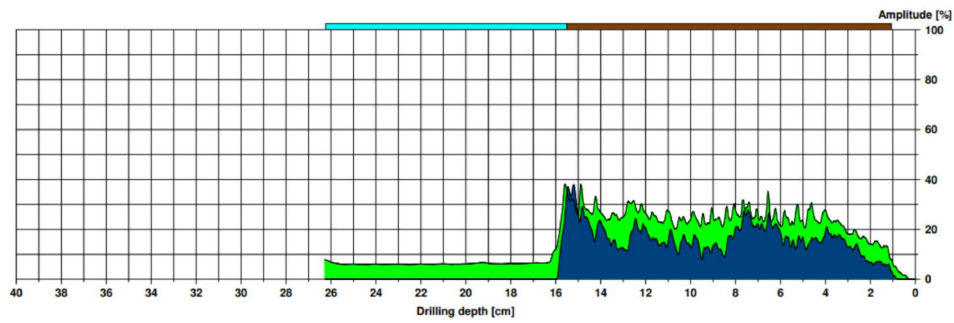
From	2,52 cm	to	34,64 cm	:	Good Wood
From	34,64 cm	to	39,26 cm	:	Crack
From	39,26 cm	to	39,90 cm	:	Good Wood

Comment

14 GREENAWAY OAK 3.5M SM008

Measuring / object data

Measurement no.:	3	Speed	: 2500 r/min	Diameter:	144,00 cm
ID number	: 14 GREENAWAY OAK 30 cm W	Needle state:	---	Level	: 30
Drilling depth	: 26,28 cm	Tilt	: ---	Direction:	West
Date	: 09.11.2022	Offset	: 107 / 279	Species:	Oak
Time	: 12:18:29	Avg. curve	: off / off	Location:	14, Greenway Gdns
Feed	: 100 cm/min	Name	: Kim Dear		



Assessment

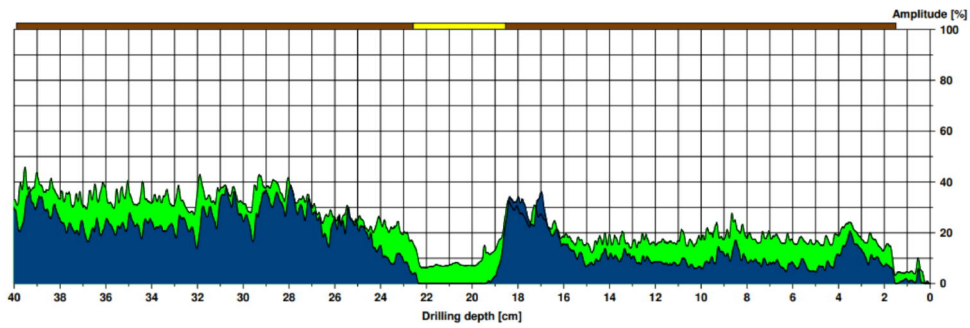
From	1,07 cm to	15,51 cm	: Good Wood
From	15,51 cm to	26,24 cm	: Cavity

Comment

14 GREENAWAY OAK 30 cm WM003

Measuring / object data

Measurement no.:	2	Speed	: 2500 r/min	Diameter:	144,00 cm
ID number	: 14 GREENAWAY OAK 30 cm NW	Needle state:	---	Level	: 30
Drilling depth	: 40,08 cm	Tilt	: ---	Direction:	Northwest
Date	: 09.11.2022	Offset	: 115 / 324	Species:	Oak
Time	: 12:16:40	Avg. curve	: off / off	Location:	14, Greenway Gdns
Feed	: 100 cm/min			Name	: Kim Dear



Assessment

From	1,49 cm to 18,55 cm	: Good Wood
From	18,55 cm to 22,58 cm	: Crack
From	22,58 cm to 39,90 cm	: Good Wood

Comment

14 GREENAWAY OAK 30 cm NWM002