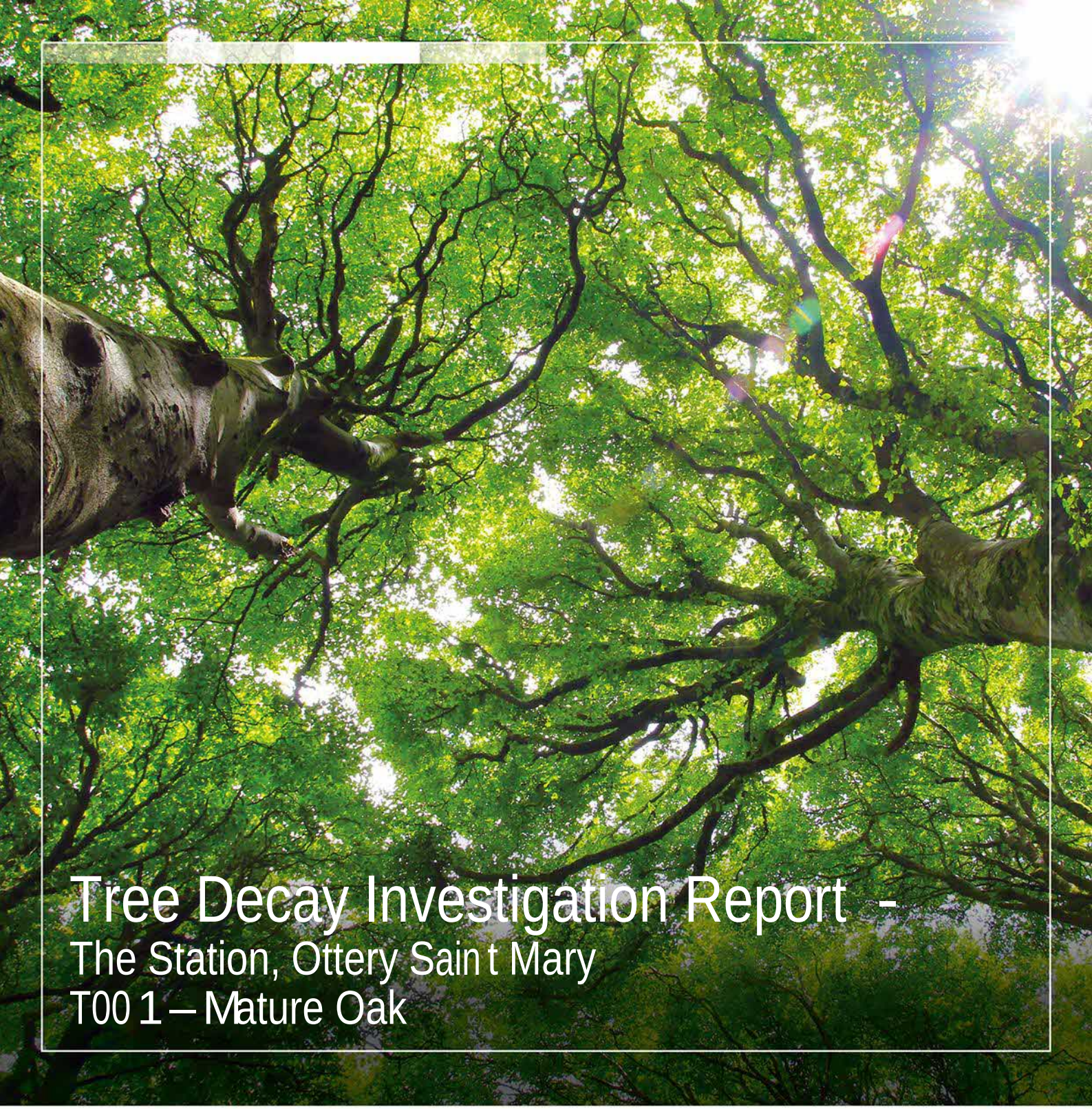

Tree Decay Investigation Report -

The Station, Ottery Saint Mary

T001 – Mature Oak

HI-LINE

TREE MANAGEMENT, CONSULTANCY & TRAINING

we're all about trees

TREE DECAY INVESTIGATION REPORT

Prepared by

RSK Hi- Line Limited

For

Mr Stephen Goss

SITE ADDRESS (THE SITE):	The Station, Mill Street, Ottery Saint Mary EX11 1AH
LOCAL PLANNING AUTHORITY:	East Devon District Council

CUSTOMER CONTACT:	Mr Stephen Goss
CUSTOMER TELEPHONE:	[redacted]
CUSTOMER E-MAIL:	[redacted]

HI-LINE JOB REFERENCE:	RSKHL_8289.24		
SURVEYED BY:	Mark Read	DATE:	6th March 2024
REVIEWED BY:	David Hansford	DATE:	13th March 2024

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1 REPORT LIMITATIONS

1.1 Reliance – This Tree and Condition Survey and Risk Assessment has been prepared for the Client and may only be relied on by the Client.

1.2 Period of Reliance - Unless agreed otherwise by Hi-Line in writing, the information and findings in this Tree Condition Survey and Risk Assessment shall remain valid for a period of six (6) months from the date of the relevant survey.

1.3 Third Party works/services - Hi-Line shall have no liability to the Client (or any third party) for any works, services and/or recommendations set out in this Tree Condition Survey and Risk Assessment to the extent that any such works, services and/or recommendations are carried out or otherwise implemented by a third party not being Hi-Line.

1.4 Limitation of liability - Subject to any limitations that are not permitted by law, the aggregate liability of Hi-Line under and in relation to this Tree Condition Survey and Risk Assessment in respect of all claims, losses or damages, whether arising from negligence, breach of contract or otherwise shall be limited to the proceeds of insurance that Hi-Line receives from its insurers in respect of the relevant claims, losses or damages.

1.5 Site conditions – Any physical alterations to the condition of the Site after the date of this Tree Condition Survey and Risk Assessment will have the potential to invalidate the findings and recommendations in this Report. In the event of such physical alterations do take place then the Client should contact Hi-Line.

1.6 Subsidence – Issues of subsidence and heave have not been considered or addressed in this Tree Condition Survey and Risk Assessment and soil samples have not been taken. If the Client does wish for issues of subsidence to be assessed and reported on, then the Client should contact Hi-Line.

1.7 Weather, vandalism and accident – This Tree Condition Survey and Risk Assessment does not take account, or provide any advice in respect, of extremes of weather/climate, vandalism or accident whether the same are physical, chemical or fire related and Hi-Line accepts no liability in respect of the same. For example, and without limiting the foregoing, snow and/or flood conditions can place unpredictable and therefore unforeseen physical strains on trees and vegetation.

1.8 Equipment Limits - Decay detection via microdrill (such as the IML Resi-F500 SX used as part of this assessment) is limited to the provision of relative resistance measurements. This minimally invasive method ensures no wood or material samples are taken from the subject tree as part of the investigation. Internal density of trees varies by species, wood type, wood health, and decay type, which may be accelerated

by decay fungi (if present), therefore, results are open to interpretation based only on resistance readings, with no visual or material testing of the drilled medium undertaken.

2 ASSESSMENT METHODOLOGY

2.1 A decay detection investigation was undertaken of one mature Oak (Quercus robur), as instructed by the client, with the use of an IML Resi F500 SX micro-drill, in accordance with the manufacturer instructions and industry best practice for the use of such equipment. An updated arboricultural risk assessment was also conducted, in consideration of the test results, following the general principles laid out in the QTRA methodology (Appendix A), using established industry standard inspection techniques and recorded in the tree inspection inventory (Appendix C).

2.2 The most likely mode of failure is considered regarding the subject tree(s), as this represents the highest potential risk of harm.

2.3 The immediate rooting environment and all parts of the trees were considered. Only significant defects or conditions that may require consideration in the future have been recorded.

2.4 Please note that the visual inspections and risk assessments are made with the over-arching goal of assessing a tree's ability to withstand the range of normal weather events that might reasonably be expected to occur. The estimated risk of harm posed by the trees remains relevant for twelve months in the absence of environmental change (including but not limited to trenching works, major storms, and unapproved pruning).

2.5 No investigations were made of underground parts of the trees. No soil, fungal or plant samples were taken or have been analysed. This report makes no reference to the possible effects of tree roots and shrinkable soils.

2.6 No estimated pedestrian or vehicular usage for any of the site requiring tree inspection has been provided. This information is used to determine the appropriate target range when assessing the risk of failure from trees. Therefore, an estimated pedestrian and vehicular usage has been calculated whilst carrying out the survey. Should the customer feel that the site usage for pedestrians, vehicles or property values described in this report is or are inaccurate, then the customer must notify the same to Hi-Line as soon as possible in order for this report to be amended.

2.7 The IML-RESI F500 SX Series wood testing drill measures the quality of the internal state of the wood by recording the drill resistance of the needle penetrating the wood product. This data is collected and printed on a wax paper strip, as well as being recorded digitally (Appendix C). The Resi-F500 SX used by Hi-Line in this investigation uses a microdrill tip capable of taking readings up to 508mm deep (20in) and in doing so can provide an accurate indication of wood strength at the test site, even on some of the largest trees.

2.8 In a typical investigation, a minimum of four readings are taken; one from each of the four compass points and/or at the site of suspected internal decay. The extent and thickness of the residual wall (outer layer of supporting sound wood) may then be determined and assessed as to whether it is adequate to provide support to the tree, despite the potential presence of internal decay.

3 INTERPRETING THIS REPORT

3.1 When inspecting your trees, and in consideration of the test results obtained, our surveyors assess their condition, the significance of any defects found and recommend works to reduce the risk of harm to site users, structures, and neighbours (safety works). This report will also identify future management issues and recommend works to promote a healthy tree stock (if appropriate) to reduce future costs and potential conflict between trees and neighbours or buildings (management works).

3.2 It is the responsibility of the site owner/manager to manage the risks posed by trees on the site and implement recommendations as appropriate.

3.3 Section 5 of this report (Key Findings) provides an analysis of the specific tree attributes or constraints observed, and provides recommendations for remedial action accordingly. This is cross-referenced to the raw data and supporting images in the appendices. Appendix B is an inventory table that provides a record of tree attributes and summary of any recommended risk mitigation or management works. Please note the urgency timescale we advise is for guidance only. Appendix D contains raw test data from decay detection investigations.

4 SITE CONSIDERATIONS

4.1 Implementation of works: All tree works should be carried out in accordance with 'BS 3998: 2010 Tree Work – Recommendations' (as modified by more recent research). Hi-Line is approved by the Arboricultural Association and we would recommend that you instruct a contractor that carries this approval. Their Register of Contractors is available free from - The Malthouse, Stroud Green, Standish, Stonehouse, Gloucestershire GL10 3DL, Telephone 01242 522152; website www.trees.org.uk

4.2 Statutory wildlife obligations: 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. All tree work operations are covered by these provisions and advice from an ecologist must be obtained by the tree owner or person responsible, before undertaking any works that might constitute an offence.

4.3 Trees subject to statutory controls: Where trees lie within the confines of a Conservation Area or are protected by means of a Tree Preservation Order (TPO), it will be necessary to either notify or apply to the local planning authority to undertake any tree work. Exceptions apply to the need to notify (Conservation Area) or apply to (TPO) the local authority, including where removing deadwood from a living tree and where an obvious, immediate and significant danger exists to persons or property. The East Devon District Council planning website indicates that the oak tree that forms the basis of this report, is protected by a TPO.

The tree is protected by:

Tree Preservation Order No: 89/307/TPO

Insert: https://eastdevon.gov.uk/trees/tree-preservation-orders-and-trees-protected-in-conservation-areas/tree-preservation-order-tpo/tpo-and-conservation-area/?x=324567.1500&y=91505.5000&uprn=100040191762

5 KEY FINDINGS

5.1 Hi-Line has been commissioned by Mr Stephen Goss (the client) to undertake an arboricultural assessment of one mature Oak tree located at The Station, Ottery Saint Mary, as owned by the client. Decay detection by Micro-drill was undertaken and forms the basis of this report and recommended works detailed within.

5.2 The subject tree has been itemised within the Tree Inventory Schedule located in Appendix B of this report, with specific comment made with regard to tree condition and risk mitigation works outlined below.

5.3 The subject oak tree is located within a commercial/industrial estate in Ottery St Mary, bordering Barrack Road and Alansway (road). The site is currently used for storage of vehicles on a permanent basis and is in the process of being developed/expanded for the same purpose. Targets associated with the subject tree are currently limited to permanently parked vehicles with occasional pedestrian occupancy, however the frequency of visiting clients (pedestrian occupancy) is set to increase in the near future, following completion of expansion and development of the business forecourt. The site is closed to the public and secured by locked perimeter gates/fences after business hours.

Original Arboricultural Assessment – Jan 2024.

The following arboricultural assessment was undertaken on 4th January 2024. The decay detection investigation that forms the basis of this report was carried out as a primary recommendation, with the aim of providing further clarity on the structural integrity of the tree's basal area and lower stem. Please note; due to visual limitations at the time of year at the initial inspection (Jan 2024), and to more recent observations, the fungus Pseudoinonotus dryadeus appears to be prevalent at the northeastern aspect of the tree's basal area in addition to Ganoderma spp. fruiting bodies.

5.4 T001 – Pedunculate oak. A standalone, protected (TPO) mature oak tree in fair to good physiological condition, and poor to fair structural condition. The tree's growing environment appears to have presented challenges due to site usage, whereby the entire rooting environment is covered with tarmac up to the root flare. Evidence of ground contamination by fuel is visible, which may have adversely affected tree health via root contact over extended periods of time, though to an unknown degree. Evidence of mechanical basal/stem damage is also present.

5.5 Five fungal fruiting bodies are present at the basal area and lower stem. The largest four fungal fruiting bodies are heavily degraded and covered with moss/vegetation, however one younger fruiting body on the western side of the stem indicates that

the species of [the westernmost] fruiting bodies are that of Ganoderma resinaceum. [1] The four larger [Pseudoinonotus dryadeus][2] fruiting bodies are located on the northern/northeastern aspect of the stem. Acoustic hammer tests indicate localised hollowing and wood softening associated with fungal action, including that of buttress roots on the northern, northeastern and northwestern aspects, with minor bark delamination in places.

5.6 The southern aspect of the stem and basal area shows a visible and significant decay cavity, measuring approximately 1m across and to approximately 800mm above ground level. This cavity appears to have developed over many years, following likely mechanical damage at the buttress and lower stem. As is common in oak and due to the tree's weakest wall of defence being that which resists the vertical spread of decay, the cavity is expected to extend vertically beyond the visible openings. It is estimated that approximately 50-60% of the basal circumference of the tree is compromised via fungal decay and/or open cavity. Buttressing on the western side of the tree appears to be good, however ganoderma fungal fruiting bodies are present and the buttressing may not be adequate to compensate for overall strength loss in the future. A southerly lean bias of the tree compounds the risk of basal failure posed by the above factors, as both the tension and compression wood at the base of the tree appears to be structurally compromised; the tension side due to decay associated with wood decay fungi, and the compression side due to the large basal cavity – primarily on the western side of the stem. Evidence of compensatory reaction wood is present on the eastern side of the base/stem in addition to the aforementioned buttressing on the western aspect, however this is not confirmed to be adequate for structural support of the whole tree alone.

5.7 Crown break appears at approximately 4m above ground level, dividing thereafter into two primary leaders with approximately 10 secondary scaffold limbs. Visual inspection of the primary unions is obstructed by ivy growth. Internal crown epicormic and minor deadwood is visible throughout (approx. 50mm diameter) and overhangs parked vehicles. The crown extremities and live growth appear to be good overall despite evidence of a 'sensitive' crown reduction, likely undertaken within the last five years. The crown has been raised recently via removal of epicormic growth, and historically via removal of large limbs. Wound wood growth associated with the large pruning wounds appears limited. The tree is considered to be in an irreversible decline due to fungal association and advanced basal decay, as well as the compromised growing conditions. Although estimation of the likelihood of whole tree failure is limited at present due to the unknown extent of basal decay, the visible indications of decay are such that the risk of whole tree

[1] A parasitic wood decay fungus attributed to a selective white rot, i.e., causing degradation of lignin, thereby leaving the soft cellulose-rich elements of the wood and a relative reduction in structural wood.

[2] Associated with a selective white rot, gradual stem hollowing and associated buttressing in oak.

failure is increased when compared with a structurally more optimised specimen lacking the described constraints. Advanced decay detection would facilitate a more informed analysis as to the extent and pattern of internal decay, and therefore the likelihood of whole tree failure, however it should be noted that following a visual inspection, the tree is already considered to be in its last few years of a safe useful life expectancy. Mitigation of the risk of whole tree failure by heavy crown reduction is an existing management option, though the tree is unlikely to respond well due to the observable compromising factors, such that an accelerated decline would be expected. Please see the Inventory Inspection Table (Appendix B) for risk mitigation recommendations and timeframes.

5.8 Micro-Drill Results Analysis (undertaken 6th March 2024)

Seven drill readings were taken from the tree; four from each of the primary compass points, an additional two from structurally significant buttress roots and one from the northern side of the stem at approximately one-metre above ground level (to give a comparative/control reading).

5.8.1 Northern aspect: A drill shot was taken from the northern side of the stem, at a primary buttress root considered to be significant in terms of the tree's stability under tension. The shot was taken at approximately 300mm above ground level at a site in close proximity to fungal fruiting body (hereafter; ffb) association with Pseudoinonotus dryadeus. Pathogenic fungal action appears to have significantly affected the drill site, as the reading at the initial 270mm depth shows negligible resistance / very low amplitude. Normal resistance is observed from 280mm depth to the full 500mm tested, with the expected early and latewood peaks/troughs clearly visible. The very low amplitude reading to 270mm depth is significant in terms of strength loss of one of the tree's most prominent buttress roots on the tension side.

5.8.2 Eastern aspect: A drill shot was taken from the eastern aspect of the stem at a point immediately adjacent to a site of fungal association (Pseudoinonotus dryadeus). Fungal fruiting bodies were no longer present, with only evidence of heavily degraded tissue remaining. The drill shot was taken at a section devoid of buttressing, however a minor root flare form is visible where the tree's lean and expected reaction wood formation is observed. The reading showed no resistance from 0-190mm depth, indicating complete degradation of bark, cambium and sapwood to this depth. Normal readings were observed from 190mm depth, with pronounced early/late wood peaks and troughs as expected of Q.robur. The extent and location of degraded wood observed corresponds with the mode of decay associated with Ganoderma sp., i.e., degradation of lignin, leaving a soft white rot and little in the way of resistance when a micro-drill is employed. The pronounced peaks/troughs and good amplitude observed from 190mm depth onwards, indicates the presence of sound heartwood on the eastern side of the stem. It

should be noted that Ganoderma sp. associate with below-ground portions of the tree as well as the lower stem, such that decay may potentially have spread from roots to the test site.

5.8.3 Southern aspect: The southern aspect of the stem shows minimal flare, as expected of an oak on a pronounced lean in the same direction. Reaction wood typically develops on the tension side of broadleaf trees, as observed in T001. The comparatively flat surface of the test site showed no external symptoms of internal decay, and no visible ffb present at the time of test, or at the initial inspection in January 2024. Resistance readings showed good amplitude from 60mm depth (after initial low amplitude at the bark and fissures). A gradual reduction in amplitude is observed between 80mm and 220mm depth, however adequate resistance remains as well as defined early and late wood peaks/troughs respectively. Resistance readings from 220mm depth to the full 500mm showed good wood quality with no cause for concern, indicating sound heartwood.

5.8.4 Western aspect: The western side of the stem shows an open cavity with significant sapwood and heartwood decay. Potentially initially caused by a vehicle strike (as the area was formerly used as a train station carpark), this large section of the stem exhibits a near complete lack of structural integrity. Resistance readings demonstrated this, with amplitude remaining at zero beyond the bark layer to the full 500mm depth. The lack of support provided by the near entire western aspect of the basal area indicates the importance of sound wood on the north, east and southern aspects.

5.8.5 Northwestern aspect: The northwestern drill shot was taken from a buttress root on the tension side of the south-leaning stem. This root is considered to be structurally significant for this reason, and more so due to the compromised support provided by other points around the circumference of the tree's basal area. Resistance readings showed pronounced peaks and troughs associated with sound early/late wood to approximately 380mm depth, where amplitude peaked then troughed, dramatically. This reading is likely to indicate the point at which the drill needle breached a reaction zone (peak) and entered an area of decay behind the buttress root. The area of decay appears to be that of a soft/white rot, as no indication of late wood is shown. Amplitude increases at 450mm depth for the remaining 50mm, indicating the presence of sound heartwood. This suggests the buttress root appears to be of sound quality, whereas decay behind the root is present and developing. This is often seen in oak, whereby buttresses remain as stand-alone supporting structures whilst heartwood decays, leaving an 'Eiffel Tower' form, as is associated with Pseudoinonotus dryadeus; hence its commonly used name, Eiffel Tower fungus.

5.8.6 Northeastern aspect: The northeastern drill shot was taken from a buttress root located immediately adjacent to a site of fungal association by Pseudoinonotus dryadeus – (on the opposing side of the buttress to the northern test site). This buttress location is considered to be structurally significant, as with that of the

northwestern site, as it also is on the tension side of the south-leaning stem. Amplitude readings initially show sound wood from 35mm depth to 130mm, however resistance drops significantly and shows a lack of early/late wood peaks and troughs until 320mm, and again after 380mm depth. The troughs indicate an area of significant strength loss due to the presence of a white rot, commensurate with the mode of decay caused by Pseudoinonotus dryadeus and Ganoderma resinaceum. The advanced spread of fungal fruiting bodies (degraded) at this location, coupled with the presence of decay on the tension side of the stem, gives rise to the possibility that the below-ground areas of the rootplate may also be structurally compromised.

5.8.7 Northwestern aspect, 1m above ground level: The reading at this test site showed a steady increase in resistance and very pronounced early/late wood peaks and troughs. This should be used as a comparative reading, with amplitude and pattern exemplifying that of a healthy example of the species.

Conclusion and Recommendations

5.9 The pattern of decay and dysfunction indicated by the visual, acoustic and micro-drill analysis shows significant levels of decay and structural dysfunction are present at multiple points at the basal area of T001. The tree is on a moderate southerly lean, with compression wood therefore on the southern side, and tension wood on the northern side. The large visible cavity on the western side of the stem places a greater significance on the importance of the remaining basal areas in terms of overall structural integrity. Wood strength on the compression side appears to be good, however the buttress and flare on the northern, northwestern and northeastern sides are compromised by wood decay fungi, as indicated by the test results. The presence of pathogenic fungal association below ground is likely due to the extent, spread and location of species capable of associating with this area of the tree, namely Ganoderma sp. This however remains an unknown due to the covering of hardstanding throughout the root plate, but should be taken into account in terms of overall tree failure potential.

5.10 Ganoderma resinaceum is known to contribute towards a complete loss of tensile strength in roots and buttresses (as well as lower stem) and as such, its association with buttresses on the north (tension) and northeastern side of T001 is significant. The tree's vitality appears to be good, as indicated by the full crown (post-reduction), extension growth and bud development. This suggests that, while Ganoderma resinaceum is able to breach reaction zones and compromise structural integrity, its spread may be slowed via competitive production of reaction zones. Test results show that the buttresses of T001 under tension are compromised, however, with the additional presence of Pseudoinonotus dryadeus compounding the problem via degradation of wood between the buttress (stem flutes), as is the species' known mode of decay. The expected hollowing caused by Pseudoinonotus dryadeus will also likely compound challenges posed by the large cavity on the western side of the stem.

5.11 T001 is located among significant targets of value (numerous vehicles on all sides), and is considered to be in a state of irreversible decline in terms of basal structural integrity, whilst remaining in relatively good physiological condition overall. Although the tree's vital signs are such that the spread of basal decay may be slowed via effective compartmentalisation, eventual overloading through leverage at the compromised root flare/plate is likely, resulting in whole tree failure. The timeframe in which this may occur is unpredictable, however it would be reasonable to suggest that the tree is currently in its final few years of safe useful life expectancy. Risk mitigation options include a heavy reduction of the southern aspect of the crown to reduce leverage at the root plate by 'correcting' the tree's centre of gravity, or an overall heavy crown reduction, also so as to reduce leverage at the root flare as well as overall wind sail. Both of these options would likely result in an accelerated decline in tree health due to a vital loss of stored energy reserves, as well as reduce significantly the amenity/aesthetic value of the tree, however. T001 is not considered to be imminently dangerous, though its mode of failure and resulting significant harm/damage is reasonably foreseeable. As such, proactive intervention via tree removal and replacement within three years of the date of this report would not be considered an unreasonable management approach.

APPENDIX A – QTRA Methodology

The Quantified Tree Risk Assessment (QTRA) (© Quantified Tree Risk Assessment Ltd. 2010) method has also been utilised to assist in estimating the risk of harm posed by the trees.

Quantified Tree Risk Assessment evaluates the 3 primary components of the risk from falling trees:

1) Target (in tree risk management, the target is that which might be harmed by a falling tree or branch),

2) Size of tree or branch under consideration, and

3) Probability of failure of the tree or branch within the coming year.

The values are applied in ranges as set out in tables 1, 2 and 3 of the QTRA Practice Note (V5.3.1 (UK) July 2018). The calculation uses the upper value for the selected range (e.g. target range 1, which spans a range of values from 1/1 to >1/10, calculates at the highest value of 1/1).

The 3 components are multiplied, and their product is the annualised risk of harm.

More information on this can be found by going to the website www.qtra.co.uk

QTRA advisory thresholds:

Table 1: A description of the QTRA risk threshold taken from the practice note

THRESHOLDS	DESCRIPTION	ACTION
1/1 to 1/1000	Unacceptable Risks will not ordinarily be tolerated	Control the risk
1/1000 to 1/10,000	Unacceptable (Where imposed on others) Risks will not ordinarily be tolerated	Control the risk Review the risk
	Tolerable (by agreement) Risks may be tolerated if those exposed to the risk accept it, or the tree has exceptional value	Control the risk unless there is broad stakeholder agreement to tolerate it, or the tree has exceptional value Review the risk
1/ 10,000 to 1 000 000	Tolerable (Where imposed on others) Risks are tolerable if as low as reasonably practicable (ALARP)	Assess costs and benefits of risk control Control the risk only where a significant benefit might be achieved at reasonable cost Review the risk
1/ 1 000 000 or less	Broadly acceptable Risk is already as low as reasonably practicable (ALARP)	No action currently required Review the risk

APPENDIX B – TREE INSPECTION INVENTORY

REF/ID:	Reference for Individual tree, group of trees or woodland. (T, G, H or W) followed by item number, for example: T0001/T1. Off-site trees with the potential to affect the site will be prefixed 'O' for example OT0001/OT1. (Some trees may have individual numbered tags)
SPECIES:	Single trees identified by common name and botanical name (in italics). Groups will only have common names or 'Mixed Groups'.
AGE CLASS:	N = Newly Planted 1-10yrs in age Y = Young 1/5 life expectancy SM = Semi-Mature 2/5 life expectancy EM = Early Mature 3/5 life expectancy M = Mature 4/5 life expectancy OM = Over Mature5/5 life expectancy V = A tree of great age for its species or with ecological features or cultural values similar to those of an aged tree (conferred by historic management practices).
HEIGHT:	Small = <4m, Medium = 4 - 12m, Large = 13 - 20m, Very large = >21m Otherwise, other than where the height of a tree is critical to the outcome of the risk assessment, approximately 1 in 10 trees are measured and the remainder estimated against the measured tree.
DIAMETER:	(Diameter at Breast Height) Stem diameter (in cm) measured at the height of 1.5 metres (UK) or to the nearest measurable point. DBH will only be measured if critical to the outcome of the risk assessment. For example, a stem with a significant defect such as an open cavity.
CROWN RADIUS:	An estimation (in m) of the average crown spread radius
CONDITION:	A measure of physiological condition D = Dead, P = Poor (significant defects), F = Fair (signs of significant defects), G = Good (Good health with no defects).
DESCRIPTION:	Descriptive notes on tree location and targets
SURVEY NOTES :	Descriptive notes on significant tree attributes
TARGET RANGE (TR)	Ranges 1-6. 1 = High, 6 = Low value/occupancy. Highest value target potentially affected by failure of the part most likely to fail.
SIZE RANGE (SR)	Size category of most significant part considered likely to fail. Range 1-4 and PROPERTY (PROP). 1 = Large, 4 = Small. Part identified in 'FAILURE PART' column.
POF:	Probability of failure within 12 months. Range 1-7. 1 = High, 7 = Low.
ROH:	Example: A risk of harm 1 in 20,000 means there is a 1 in 20,000 risk of the tree failing and causing £2,000,000 of damage to people or property. An additional figure in brackets may be suffixed 'T' representing the rate of multiple occupation over the year (e.g. 1(2T)/20,000 = risk of harm 1/10,000 divided between 2 occupants or the equivalent monetary value.
REVIEW YEARS:	Period to next inspection. The re-inspection intervals are either one year plus three months, two years plus three months and so on. The intervals assigned is determined by the age and condition of tree(s) and the target value. The addition of the three months enables the tree inspector to view the trees at different times of the year, for example, in leaf and during dormancy over several inspections.

APPENDIX B – INVENTORY INSPECTION TABLE- INITIAL ASSESSMENT (4TH January 2024)

Ref.	Species Common	Species Botanical	Height (m)	Dia (cm)	Age Class	Recc. Inspect Period	Description	Mode of Failure Considered	Condition	Target Range	Size	PoF	RoH	Control Measures	Timescale
T001	Pedunculate oak	Quercus robur	18.0	136	Mature	1 Year	Standalone TPO mature oak in industrial estate; rooting environment entirely covered by tarmac up to the root flare on all sides. Contaminated land (fuel). 5 x ganoderma brackets at base uncovered, likely G. sessile (formerly lucidum) though all but one heavily degraded and covered in moss/ivy/vegetation (uncovered). 4 x ffb on N side with acoustic hammer test showing localised hollowing and buttress softening, bark delamination minor. Western side shows new smaller bracket. Southern aspect shows visible cavity: approx. 1m diameter to 800mm above ground level (AGL), extending decay vertically - likely. 50-60% basal circumference area compromised through decay and/or cavity. Extent of internal and root decay unknown. Buttressing on western side good, however Ganoderma also present. Lean bias to south; compromised on tension side due to FFB/decay and on compression side due to cavity. Some evidence of reaction wood on eastern side with buttressing on west, however adequacy is questionable. Crown historically reduced with good response, epicormic removed to 3m AGL. Minor southerly lean into crown, crown break at 4m AGL into 2 primary leaders with approximately 10 secondary scaffold limbs. Internal crown epicormic and minor deadwood (approx. 50mm diameter) throughout. Live extremities good. Dense ivy on stem on northern side covers main union with primary leaders. Old large pruning wounds visible. Targets include multiple vehicles on all sides – parked permanently as awaiting repair. Pedestrian occupancy is low at present however is likely to increase in future as site being extended/improved for same business purpose.	Whole tree failure (southerly direction) onto multiple parked cars due to basal decay.	Poor-Fair	Property(2) £200,000 - £20,000	Property	PoF(5) 1/10K - 1/100K	1/300K	Sever ivy at base and reinspect primary limb unions when visually unobstructed. Undertake decay detection by microdrill to ascertain the extent and pattern of internal basal decay.	6 Months

APPENDIX B – INVENTORY INSPECTION TABLE - POST-DECAY INVESTIGATION RISK ASSESSMENT (QTRA) – 6th March 2024

Ref.	Species Common	Species Botanical	Height (m)	Dia (cm)	Age Class	Recc. Inspect Period	Description	Mode of Failure Considered	Condition	Target Range	Size	PoF	RoH	Control Measures	Timescale
T001	Pedunculate oak	Quercus robur	18.0	136	Mature	1 Year	SEE RAW DATA (APPENDIX D) AND ASSOCIATED ANALYSIS (SECTIONS 5.8 – 5.11).	Whole tree failure (southerly direction) onto multiple parked cars due to basal decay.	Poor-Fair	Property(2) £200,000 - £20,000	Property	PoF(5) 1/10K - 1/100K	1/300K	Plan for tree removal and replacement within 3-years from the date of this report.	3 Years

Tree Risk Assessment (QTRA)
The Station, Ottery St Mary

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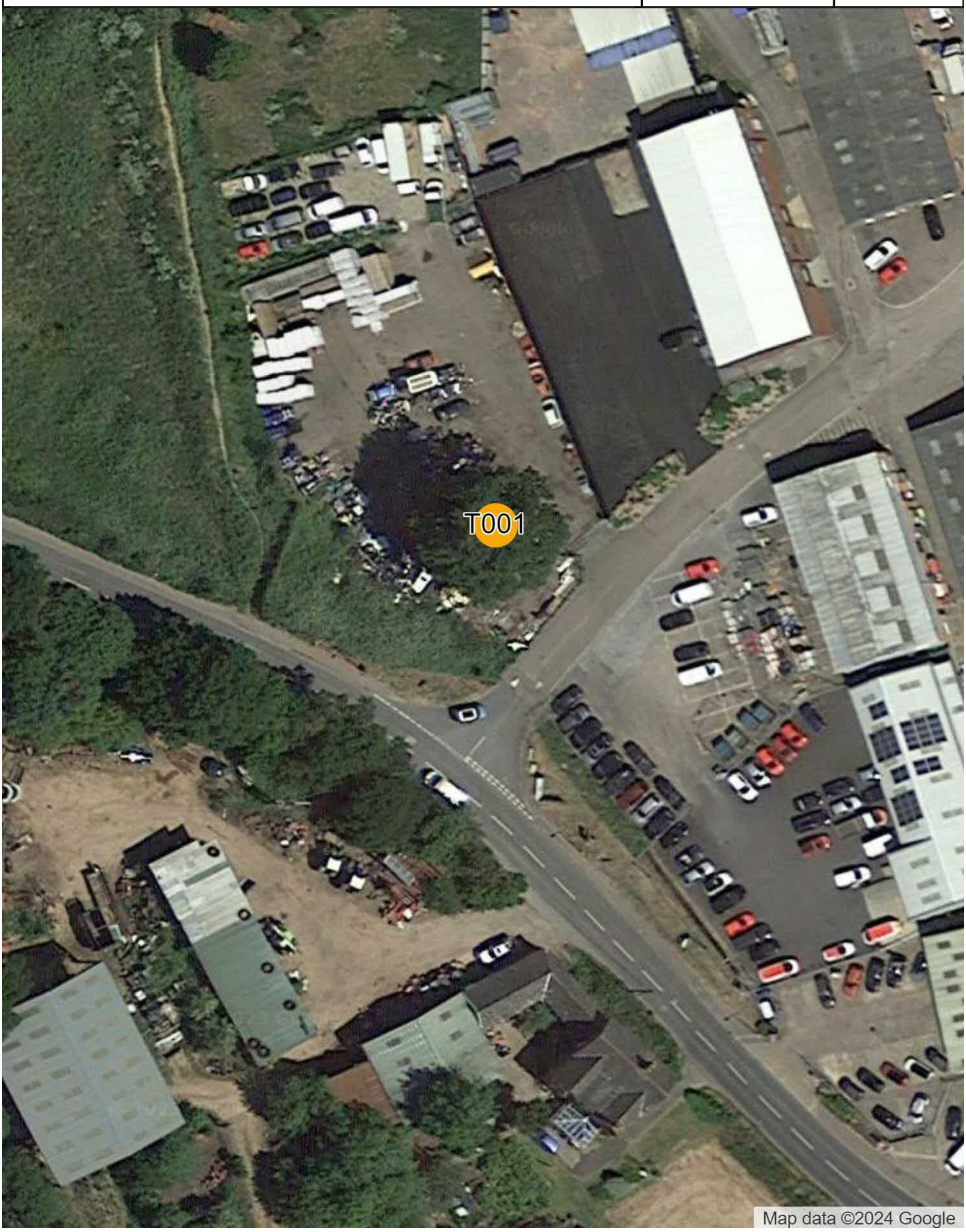
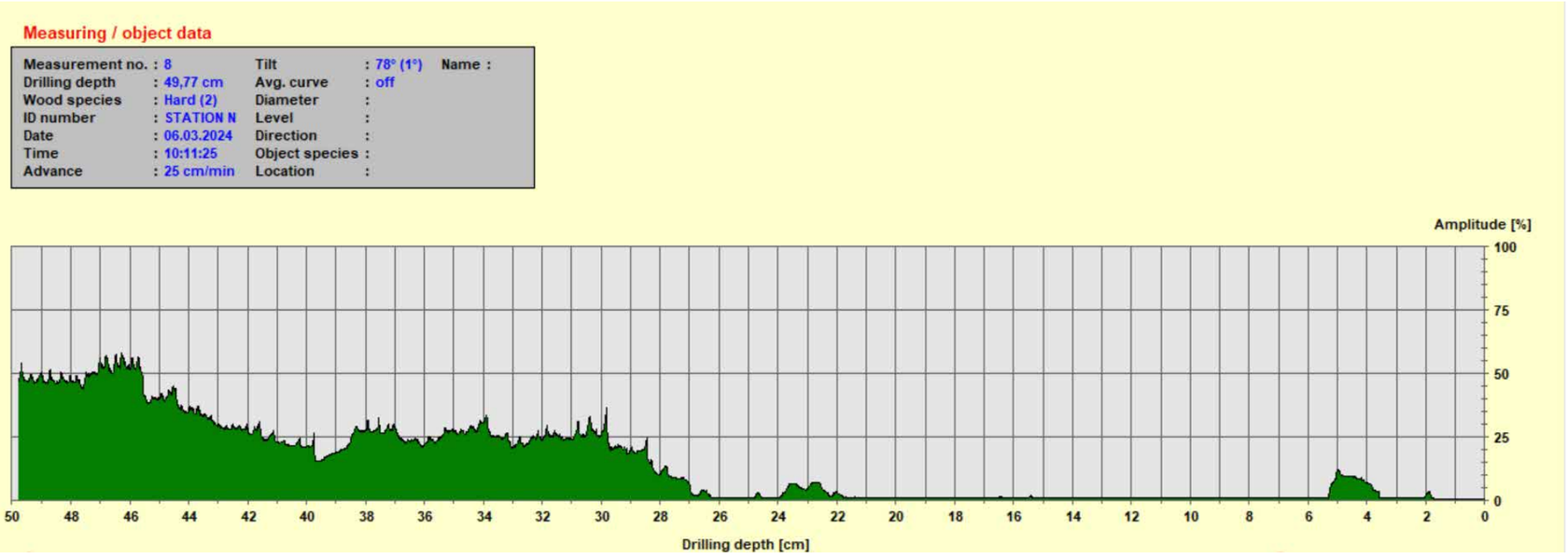
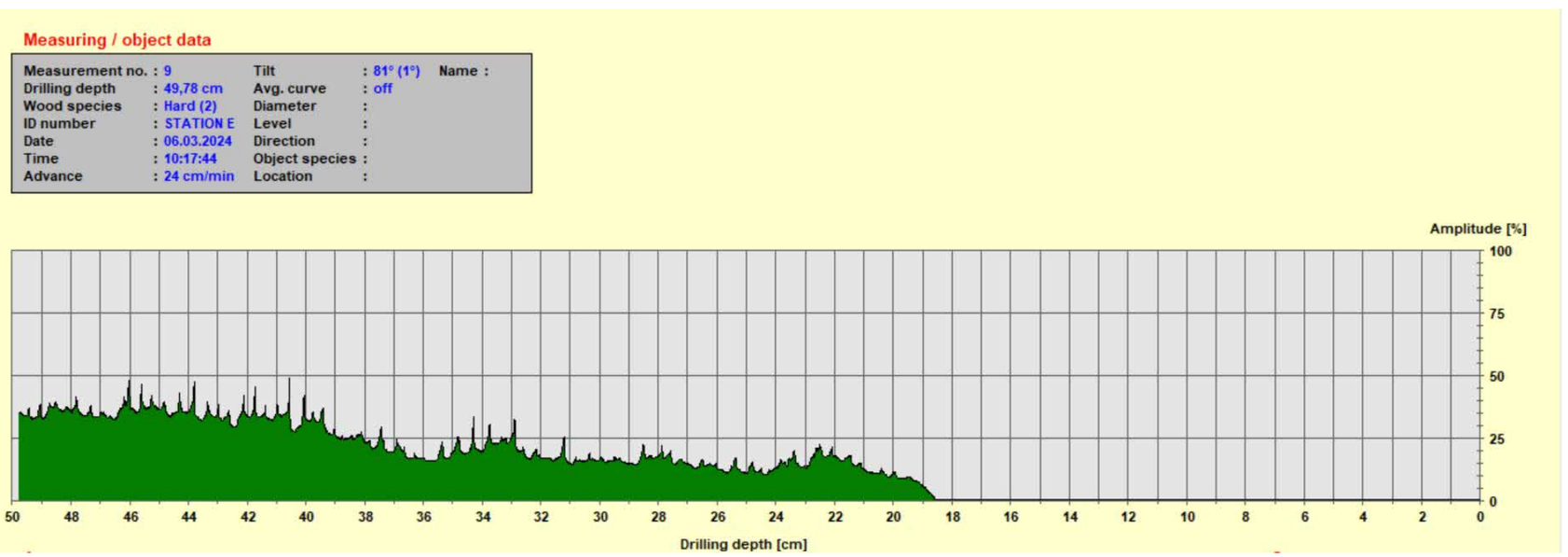


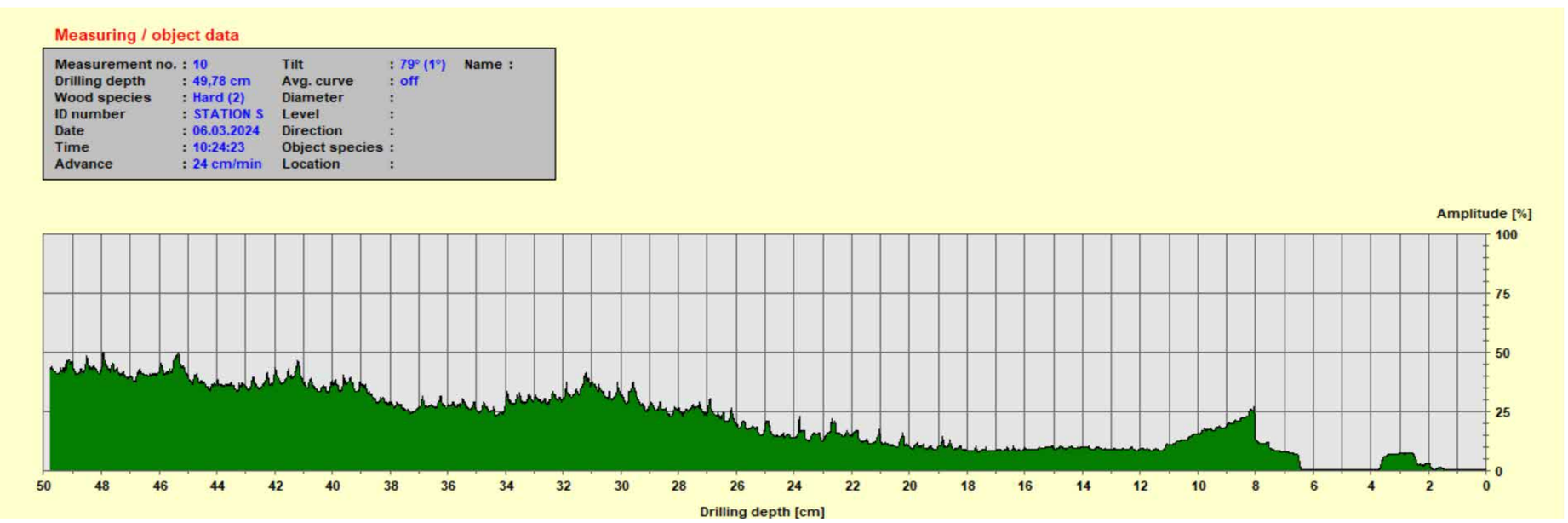
Drill point: North



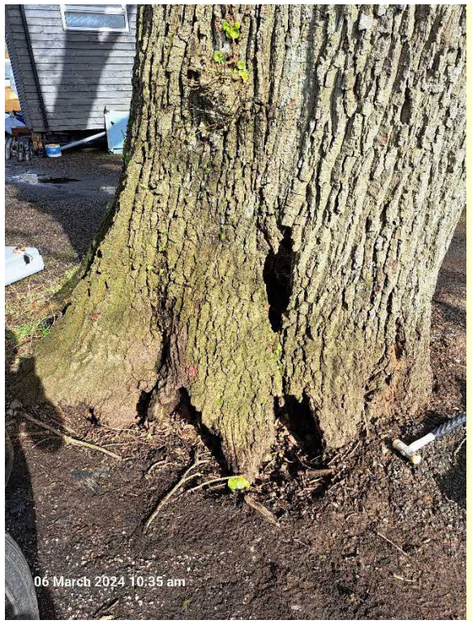
Drill point: East

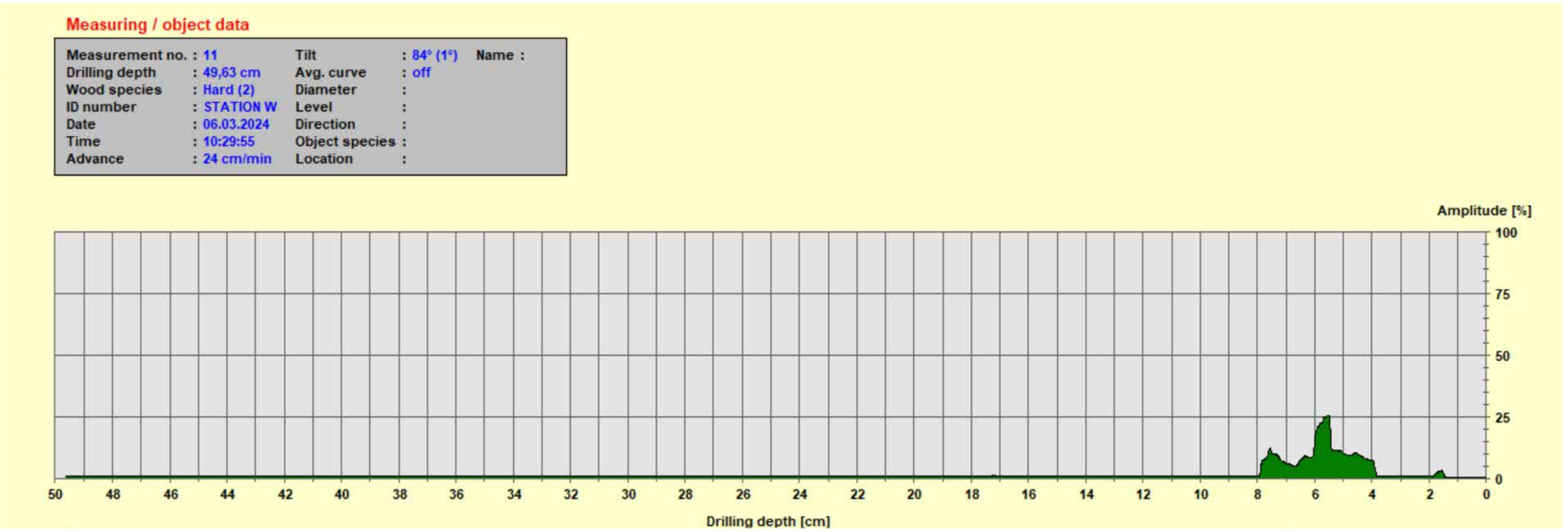


Drill point: South



Drill point: West

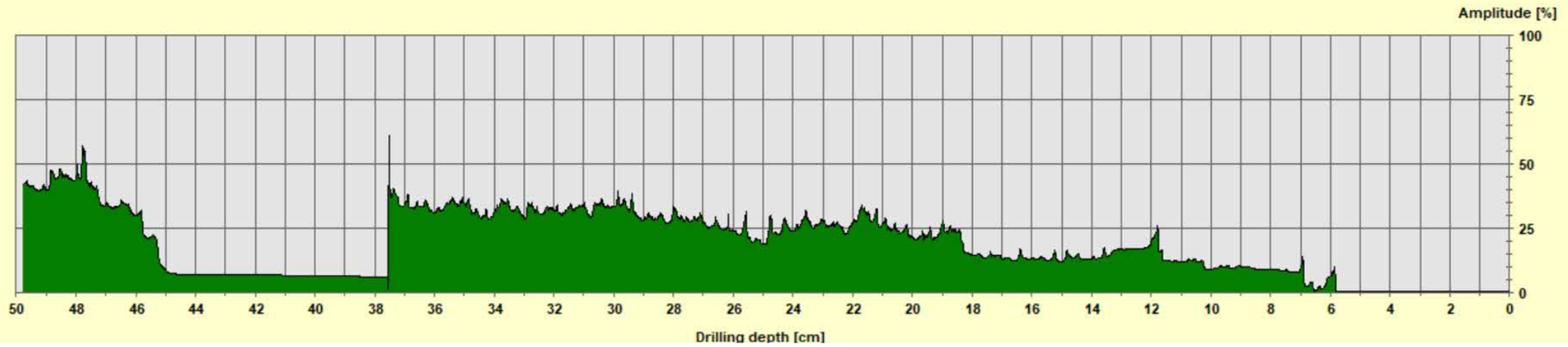




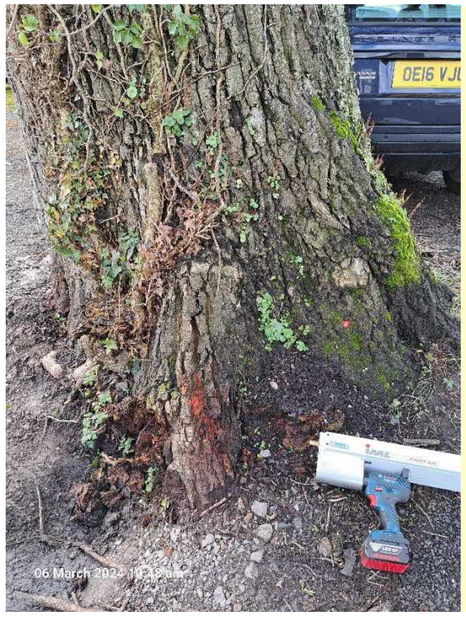
Drill point: North West

Measuring / object data

Measurement no.	: 12	Tilt	: 74° (1°)	Name :
Drilling depth	: 49,77 cm	Avg. curve	: off	
Wood species	: Hard (2)	Diameter	:	
ID number	: STATION NW	Level	:	
Date	: 06.03.2024	Direction	:	
Time	: 10:39:03	Object species	:	
Advance	: 24 cm/min	Location	:	



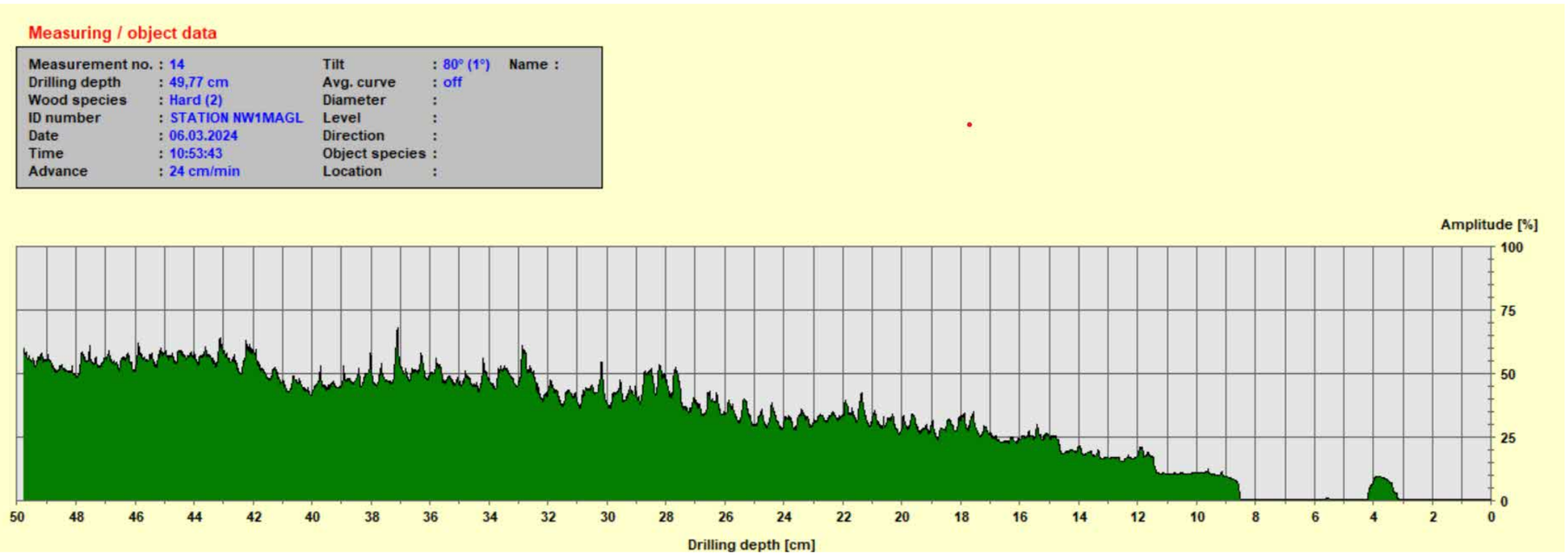
Drill point: North East



Measuring / object data

Measurement no.	: 13	Tilt	: 71° (1°)	Name :
Drilling depth	: 49,74 cm	Avg. curve	: off	
Wood species	: Hard (2)	Diameter	:	
ID number	: STATION NE	Level	:	
Date	: 06.03.2024	Direction	:	
Time	: 10:44:31	Object species	:	
Advance	: 24 cm/min	Location	:	

Drill point: North West, 1m above ground level

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