ENVIROARB SOLUTIONS

ATT: Ms Jo Beighton-Emms FdA
Community Governance
Town Clerk
Wivenhoe Town Council
Council Offices
77 High Street
Wivenhoe
Essex
CO7 9AB

Colchester
Essex

M

www.enviroarb-solutions.co.uk

15th January 2026

Arboricultural Advice – English Oak (T1)

Address: High Street Car Park off Clifton Terrace, Wivenhoe, Essex
EnviroArb Ref: EAS-253
Date: 15th January 2026

1.0 Introduction and Instruction

I write further to recent arboricultural inspections undertaken at **High Street Car Park off Clifton Terrace, Wivenhoe, Essex**, and in connection with the preparation and implementation of **Arboricultural Protection Method (APM) No. 11 – Surface Repairs of Tarmacadam Hard Surfacing within or Adjacent to Retained Trees**.

This letter provides **formal arboricultural advice** in respect of the **retained English Oak tree (T1)** located within the car park and shown on the accompanying Tree Constraints / Tree Protection Plan. The tree is located within an area subject to a **High Court Injunction** (Ref. **AC-2025-LON-004666**), which places specific legal constraints on activities that could result in damage to the tree or its rooting environment, irrespective of planning status.

2.0 Tree Identification and Survey Data

The subject tree is identified within the Tree Survey Schedule as follows:

- **Tree Ref:** T1
- **Species:** English Oak (*Quercus robur*)
- **Stem Diameter (DBH):** 0.955 m
- **Height:** 18.5 m
- **No. of Stems:** 1
- **BS 5837:2012 Category:** C1 (amended following identification of stem damage – see Section 6.0 below)

The tree is located within the High Street Car Park, with areas of existing asphalt concrete surfacing extending into its calculated Root Protection Area (RPA), as shown on the approved arboricultural drawings.

3.0 Statutory and Legal Context

Although the subject tree is **not protected by a Tree Preservation Order**, it is afforded **equivalent (and in practice more stringent) protection** by virtue of the High Court Injunction, which restrains Wivenhoe Town Council and any persons acting on its behalf from cutting down, lopping, topping, uprooting, wilfully damaging or destroying the tree.

Accordingly, all arboricultural advice, protection measures and construction methodologies have been framed on the basis that **any damage to the tree or its rooting environment would constitute a breach of the Injunction, irrespective of the absence of a Tree Preservation Order or planning controls.**

4.0 Observed Stem Damage and Exudation

During the **initial site visit**, detailed visual inspection of the lower stem of the subject Oak tree identified the following features of concern:

- Two discrete **drill holes** penetrating the stem at low level;
- Surrounding areas of **dark brown, foul-smelling exudate** emanating from the drill points;
- Associated **vertical staining / streaking** extending down the stem on opposing sides; and

- Localised bark disruption consistent with **deliberate mechanical intervention** rather than naturally occurring dysfunction or decay processes

It is understood that these drill holes were created by a *"dendrologist"* instructed by persons unknown, albeit **with the consent and knowledge of Wivenhoe Town Council**. Based on the available information, it is considered **unlikely that the Council was fully informed as to the diameter, depth or internal extent of the drilling**, nor the potential long-term implications for tree health.

5.0 Arboricultural Interpretation and Pathology Risk

The creation of drill holes of unknown diameter and depth into the stem of a mature Oak represents a **direct breach of the tree's primary defensive barriers and CODIT (Compartmentalisation of Decay in Trees) boundary zones, exposing internal tissues**, exposing internal tissues to colonisation by decay fungi and pathogenic bacteria.

Of particular concern is the strong visual and olfactory similarity of the observed symptoms to those commonly associated with **Acute Oak Decline (AOD)**, namely:

- Stem bleeds / weeping lesions with dark exudates;
- Vertical staining beneath bleeding points; and
- Apparent rapid onset following a pre-disposing stress or injury.

AOD is a **complex, multi-factorial decline syndrome** affecting *Quercus robur* and *Q. petraea*, and is now well-documented across eastern and south-eastern England, including in and around Colchester, Essex

The disease is strongly associated with **pre-disposing stress factors**, including wounding, soil disturbance and drought, and can, in documented cases, result in tree death within approximately 2–5 years, although progression rates can vary depending on site conditions and tree resilience.

Research by Forest Research and others has demonstrated that **stem wounds can act as initiation points** for the bacterial complexes associated with AOD, particularly where trees are already under environmental stress.

Based on:

- the presence of artificial stem wounds,
- the nature of the exudate observed,
- the location of the site within a known AOD-affected region, and

- EnviroArb Solutions Ltd's own observations of **accelerated decline and mortality of infected Oaks locally**,

there is a **material risk** that the subject tree has been **pre-disposed to, or is in the early stages of, Acute Oak Decline.**

6.0 BS 5837:2012 Categorisation Review

At the time of survey, and **prior to identification of the stem drilling damage**, the subject Oak tree could reasonably have been considered a **Category A1 specimen**, by virtue of its age, form and amenity value.

However, in accordance with **BS 5837:2012**, categorisation must reflect **current physiological condition, structural integrity and life expectancy**. The deliberate stem damage observed, together with the associated pathological risk, represents a **material degradation in quality and future retention potential.**

On this basis, the tree has been **downgraded to Category C1**, reflecting:

- reduced life expectancy due to probable internal decay development,
- uncertainty regarding structural integrity over the medium term, and
- the increased likelihood of progressive decline.

This reassessment is considered reasonable, proportionate and professionally defensible given the evidence currently available.

7.0 Management Implications and Recommendations

In light of the above, I recommend the following:

1. **No further invasive investigations** (including drilling, coring or probing) should be undertaken without a clear, evidence-based justification and written arboricultural method statement.
2. Any future diagnostic work should, if required, be limited to **non-invasive techniques** (e.g. sonic tomography), undertaken only following legal review of the Injunction constraints.
3. The tree should be monitored at regular intervals by a suitably qualified arboricultural consultant
4. Ground disturbance within the RPA should continue to be **strictly controlled in accordance with APM 11**, with arboricultural supervision maintained for any future works.
5. The presence of AOD-like symptoms should be **formally recorded** and, if progression is observed, consideration given to notification via **TreeAlert** in line with Forest Research guidance.

8.0 Closing Statement

The subject Oak tree (T1) remains a **highly sensitive and legally constrained asset**, whose condition has been materially compromised by historic stem intervention. While the tree remains standing and viable at present, the observed damage significantly elevates the risk of **accelerated decline**, particularly in the known and widely reported context of Acute Oak Decline prevalence within north-east Essex and the wider eastern England region.

All future decision-making in respect of this tree should therefore proceed on the basis of **precaution, transparency and legal compliance**, supported by appropriately qualified arboricultural advice.

EnviroArb Solutions Ltd

Date: 15.01.2026

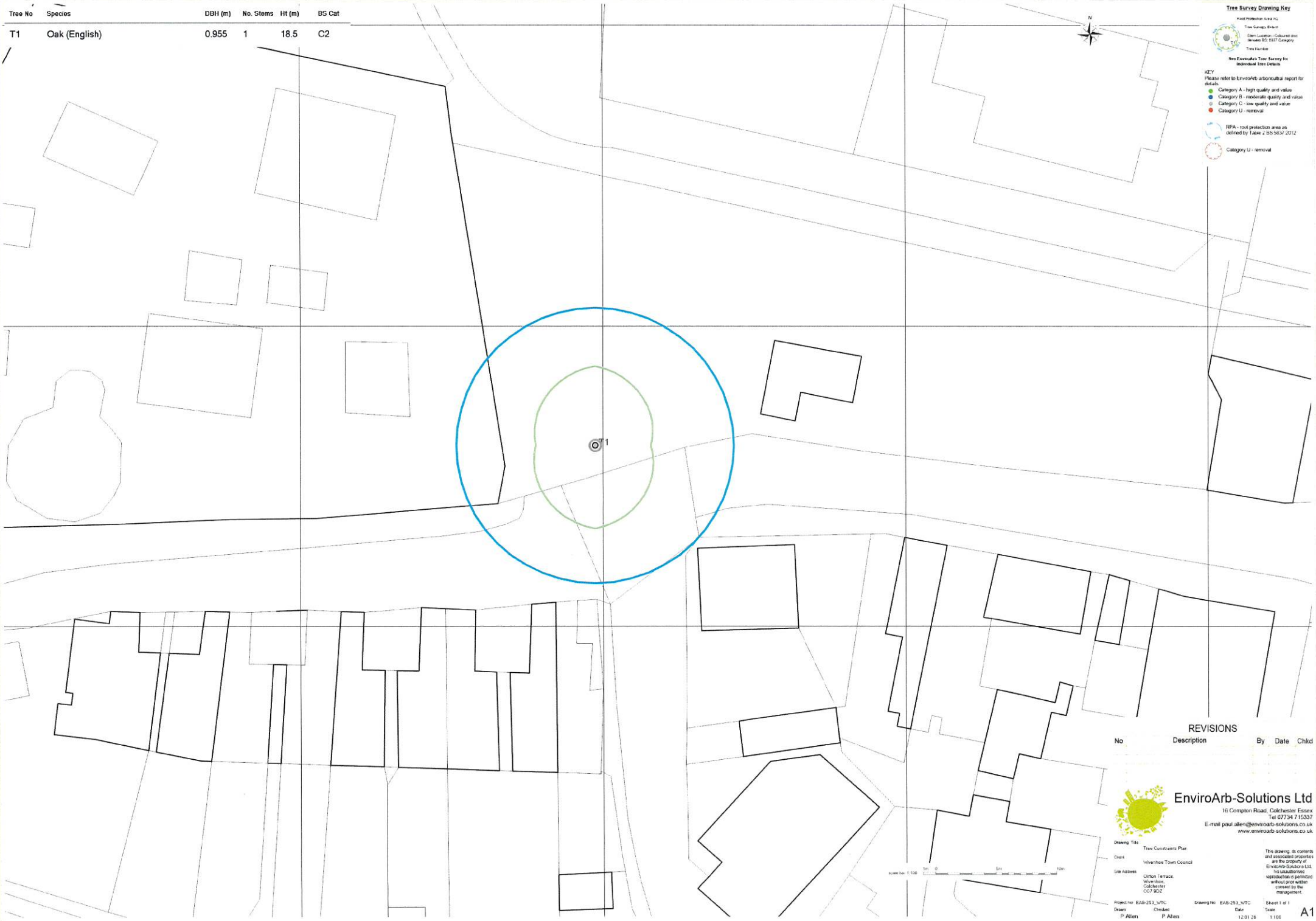
APPENDIX 1 – TREE SURVEY TABLE – T1 Oak

Tree Survey Table - T1 English Oak *(Quercus robur)*

Tree Number	Species	Height (m)	Crown Spread N (m)	Crown Spread E (m)	Crown Spread S (m)	Crown Spread W (m)	DBH (mm)	No of Stems	RPA (m2)	RPR (m)	Canopy Cover (m2)	BS Cat	Condition	Age Class	Life Expectancy (Yrs)	Re-Inspection	Crown Height (m)	Site Name	Observations	Recommendations
T1	English Oak (Quercus robur)	18.5	6.6	4.6	6.9	4.9	955	1	412.6	11.5	100.7	C2	Poor to Average	Mature	10-19	Year 1	1.8	High Street Car Park, Wivenhoe	Poor to Average form (asymmetric canopy), shape and condition. Dense crown as a result of epicormic shooting at historic and recent crown reduction pruning points. Two drill entry / exit holes observed on main trunk at 1m on West Side and 1.1m on East Side of trunk. Subsequent evidence of copious bacterial brown exudate patches around both wounds extending as linear staining down both sides of the trunk. Drill holes are estimated at 10-12mm in diameter. A 4mm diameter screwdriver was inserted to a depth of approximately 100mm into the drilled hole on the East Side of the trunk. The Western drill hole appeared to be plugged. One further brown exudate patch was observed on the South side trunk at 2.1m underneath an old fully occluded pruning wound. Further detailed trunk inspection higher than 2m was not possible and was undertaken from ground level only. The Trunk was sounded with a rubber hammer noting lower trunk with dull sounding than higher centre trunk above 1m. X 2 large buttress to North and East observed with no trunk buttressing or root flare observed to west or south. Large buttress root to East observed with historic direct damage partially occluded with wound wood. No cavity observed. No fungal fruiting bodies observed.	Monitor the health and condition of the tree particularly the number and size of brown exudate patches that could be attributable to Acute Oak Decline and / or the physical trunk damage undertaken.

APPENDIX 2 – TREE SURVEY PLAN – T1 Oak

Tree No	Species	DBH (m)	No. Stems	Ht (m)	BS Cat
T1	Oak (English)	0.955	1	18.5	C2



Tree Survey Drawing Key

Root Protection Area (m)
Tree Canopy Extent
Stem Location - Coloured dot denotes BS 5837 Category
T1
Tree Number

See EnviroArb Tree Survey for Individual Tree Details

KEY
Please refer to EnviroArb arboricultral report for details

- Category A - high quality and value
- Category B - moderate quality and value
- Category C - low quality and value
- Category U - removal

RPA - root protection area as defined by Table 2 BS 5837:2012

Category U - removal

REVISIONS

No	Description	By	Date	Chkd

EnviroArb-Solutions Ltd
16 Compton Road, Colchester Essex
Tel 07734 715337
E-mail paul.allen@enviroarb-solutions.co.uk
www.enviroarb-solutions.co.uk

Drawing Title: Tree Constraints Plan
Client: Wivenhoe Town Council
Site Address: Clifton Terrace, Wivenhoe, Colchester CO7 9DZ

Project No: EAS-253_WTC
Drawing No: EAS-253_WTC
Sheet 1 of 1
Drawn: P Allen
Checked: P Allen
Date: 12.01.26
Scale: 1:100
A1

APPENDIX 3 –PHOTOGRAPHS – T1 Oak

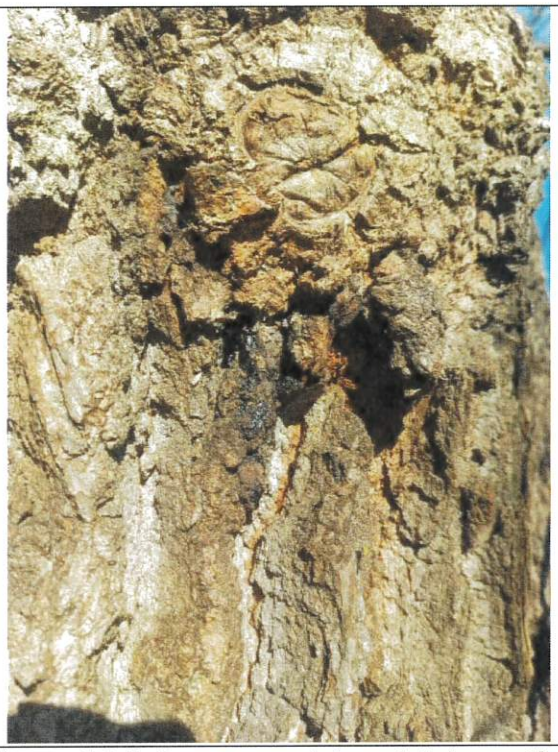
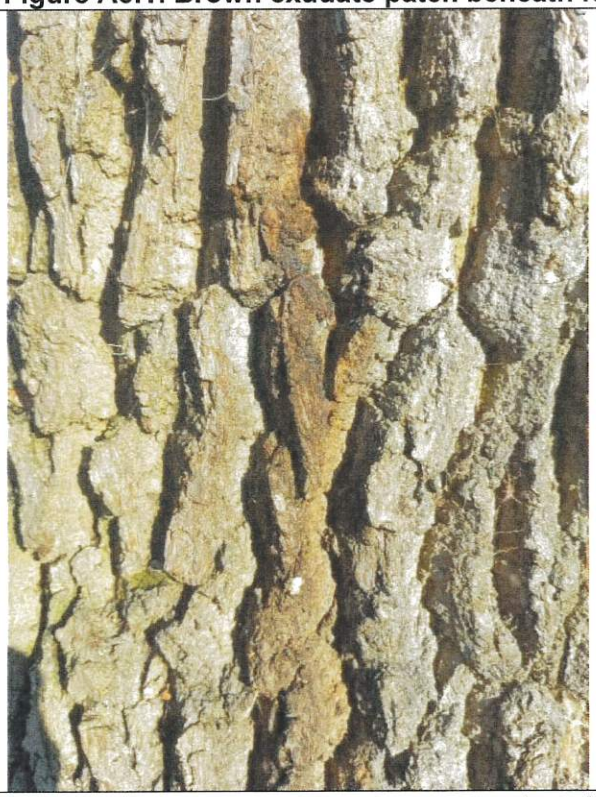


Figure A3.1: Brown exudate patch beneath fully occluded trunk wound on south side of trunk.



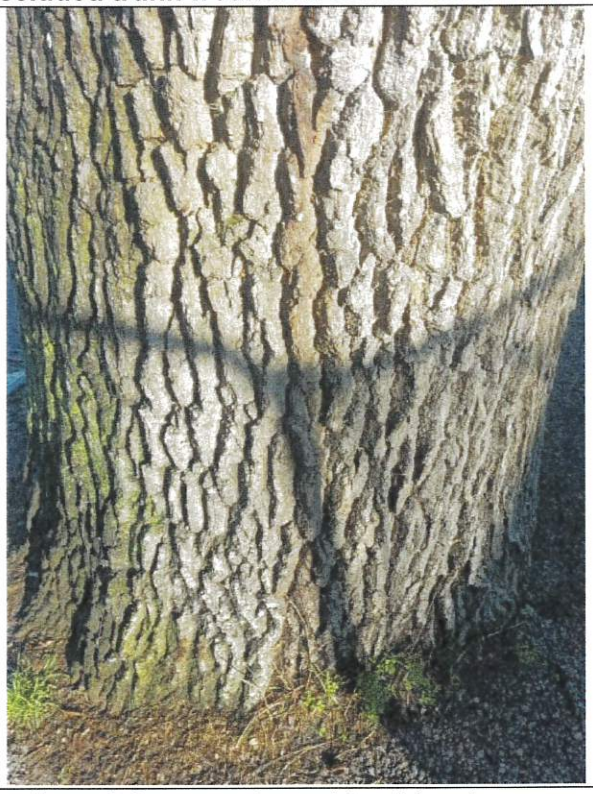


Figure A3.2: Linear brown trunk staining and exudate on eastern side of trunk

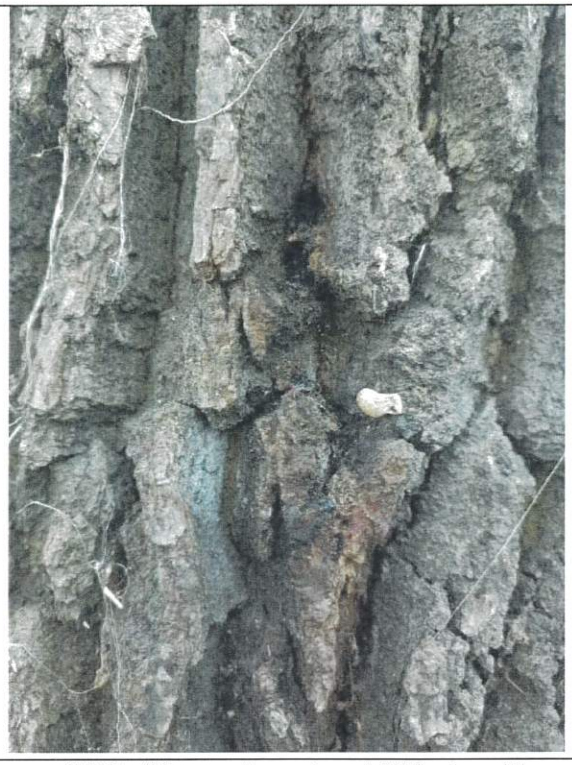


Figure A3.3: 12mm diameter drill hole with encircling exudate and 10cm screwdriver inserted into the hole on the eastern trunk.

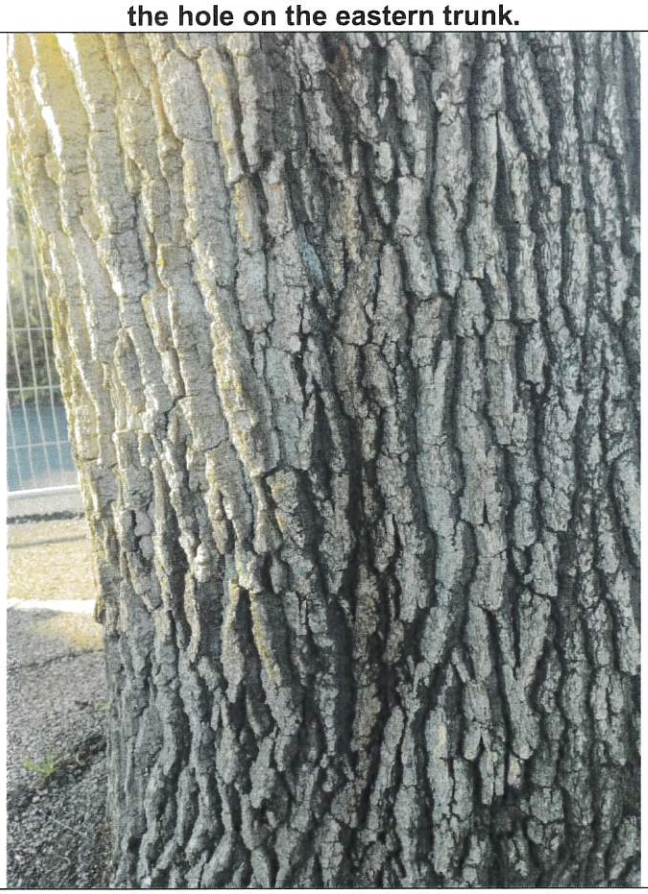


Figure A3.4: what appeared to be a 'plugged' drill hole on the western side of trunk

APPENDIX 4 – Forest Research Information Sheet – Acute Oak Decline

Acute oak decline

Present in United Kingdom

Reportable – see 'Report a sighting' below

Scientific name of causal agent – there is no single causal agent

Acute oak decline is an emerging disease of oak trees (trees in the *Quercus* genus) which was first observed in the UK late in the 20th century. It can kill oak trees within four to six years of the onset of symptoms.

The disease is found mostly on mature oak trees, but younger trees can also be affected. It is caused by multiple agents, especially bacteria, and thousands of trees are affected. For infection to occur, it is likely the trees need to be weakened (predisposed) by certain factors, especially environmental factors.

Distribution

The disease is present in warm, drought-prone parts of the UK where there are also high levels of airborne nitrogen pollution and low dry sulphur levels.

It is found mostly in south-eastern, central and eastern England, and in the Welsh Borders and South-East Wales. As of 2020 it had not been reported in Scotland or Northern Ireland. See our **Incidence and distribution page** for more-detailed information: it includes a probability map indicating the areas where the disease is most likely to occur based on analysis of the known influential factors.

Holm oak (*Q.ilex*) and Pyrenean oak (*Q. pyrenaica*) have been found affected by AOD bacteria in Spain.

Similar decline-diseases of oak have been reported in continental Europe, the Middle East and the Americas. This indicates that AOD is a global concern which might have evaded earlier scientific attention because of the complexity of its causative agents.

Susceptible species

AOD mainly affects the UK's two native oak species, which are 'English' or pedunculate oak (*Quercus robur*) and sessile oak (*Q. petraea*). However, cases of other oak species being affected have also been found, including:

- Bali oak (*Q. fabri*);
- Holm oak (*Q. ilex*);
- Oriental white oak (*Quercus aliena* var. *acutiserrata*);
- Pin oak (*Q. palustris*);
- Pyrenean oak (*Q. pyrenaica*);
- Red oak (*Q. rubra*);
- Scarlet oak (*Q. coccinea*);
- Turkey oak (*Q. cerris*); and
- Water oak (*Q. nigra*).

Most affected trees have been mature specimens more than 50 years old, but some affected younger trees with stem (trunk) diameters of 10–12 cm have been recorded.

The threat

Oak trees play significant roles in our economy, landscape, biodiversity, environment and culture. Oak timber is one of our most valuable woodland products, and hundreds of jobs and businesses depend on it to some extent. Oak trees are ecologically very important, supporting rich woodland biodiversity by providing habitat for more other species than any other tree species in the UK.

The complexity of the cause and the rate at which the number of affected trees has increased therefore gives cause for concern for two of our most important and numerous tree species. It is essential that owners and managers of oak trees are vigilant for the disease, and take steps to minimise its occurrence and spread – See **'Management and control'** below.

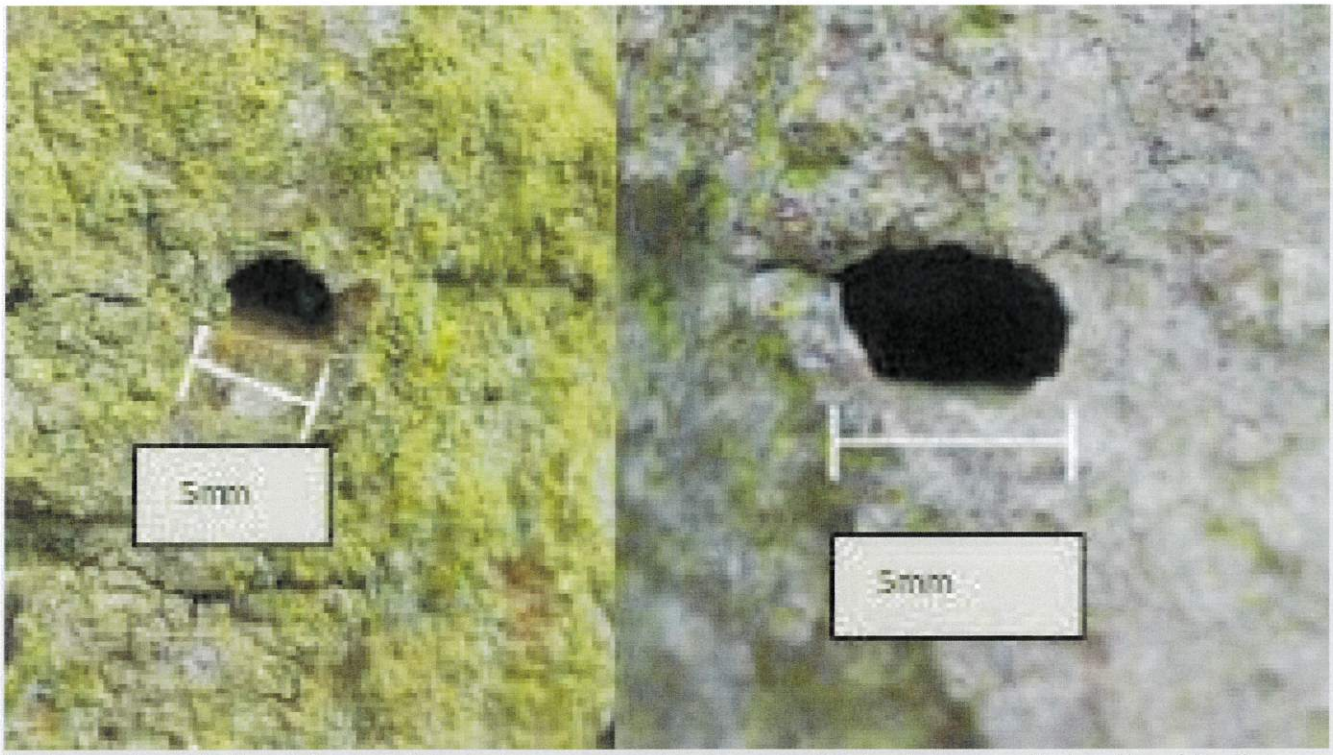
Identification and symptoms

Affected trees have dark-coloured, vertical, weeping fissures, known as stem bleeds or cankers, which seep black fluid through vertical cracks between bark plates and down the trunks, as in the first, second and fourth pictures above. A lesion (decayed tissue) forms in the live tissue beneath the bleeds. The second picture above shows the severe cracks in the bark which the disease can cause at bleed sites.

This seeping fluid can dry and cake on the tree stems at certain times of the year, as shown below.

In the early stages affected trees might have one or just a few bleeding points, but their number can increase over time.

Note, however, that weeping patches or stem bleeds are a common response by trees to tissue attack from pests and pathogens, for example *Phytophthora* species. Therefore a stem bleed alone does not necessarily indicate AOD.



D-shaped exit holes (above left) made by emerging two-spotted oak buprestid beetles (*Agrilus biguttatus*) might be present in the bark plates of affected trees – about a third of cases show this. These holes are approximately 4 mm wide and 3 mm high. For comparison, the picture on the right shows the more oval-shaped exit hole made in oak bark by an adult long-horn beetle from the Cerambycidae family of species. The scale bar is 5 mm.

Networks of the beetles' larval galleries are often found in association with, and beneath, the lesions.

The tree canopy is likely to thin, as in the third picture in the montage above, as the tree nears death, and symptoms can develop rapidly over 18 months. The picture below shows a young oak with dieback caused by acute oak decline.

Our **further page on symptoms** has more-detailed guidance and pictures to help with AOD identification.

Report a sighting

We invite reports of suspected cases of acute oak decline, especially from places where we have not already recorded it. (See the map accessible from **'Distribution'** above.)

- Report suspected sightings in Great Britain to us using **Tree Alert**.
- Report suspected sightings in Northern Ireland to the Irish forestry and plant health authorities using **TreeCheck**, the all-Ireland tree disease reporting tool.

Please note that TreeAlert and TreeCheck both require photographs to be uploaded. These should be clear, well-lit, close-up pictures of symptoms.

If you cannot use TreeAlert, you may report a suspected case to us by telephone or email to our Tree Health Diagnostic & Advisory Service.

If reporting sightings by email or phone, please include:

- a precise location of the tree/s – a **10-digit Ordnance Survey grid reference is ideal,** e.g. AB 12345 67890. Otherwise provide a full address, including property name and/or street or road number and the full postcode; and/or
- precise instructions for finding the tree/s, e.g. "40 metres north-west of the entrance to (name) Park in (name) Street";
- a telephone number where we can reach you during the daytime to clarify any points;
- a clear, well lit photograph with email reports if you can; and
- contact details of the owner or manager of the tree/s, if known.

Disease mechanism

Acute oak decline is a complex disease which manifests itself on the stems of oak trees as patches of black fluid weeping from cracks in the bark, which cover rotting tissue. In severe cases this stem rot can encircle almost the entire girth of the tree, preventing it from moving water and nutrients essential for growth up and down the stem. The trees become weak as a result, and can die within four to six years of the onset of symptoms. This is a rapid rate of decline for trees, which is why the disease is described as acute.

These bleeding lesions, or cankers, are caused by a cocktail of different species of bacteria. Three in particular, *Brenneria goodwinii, Gibbsiella quercinecans* and *Rahnella victoriana,* are consistently found in abundance in the lesions. These three bacteria species were unknown until they were discovered and described during our research into acute oak decline.

Also found on a high proportion of affected trees is the native **two-spotted oak buprestid beetle (*Agrilus biguttatus*)**. Their presence on affected trees is consistent with their preference for declining oak trees as habitat. However, in large numbers – and their numbers have been increasing since the 1980s – these insects are themselves a threat to oak trees. This is because their larvae's wood-boring activities can kill trees, which, in some cases, might otherwise have recovered from decline. It is therefore likely that they exacerbate the effects of acute oak decline and hasten its progress. They possibly also contribute to its spread by carrying the causative bacteria from affected trees to healthy trees.

Our research has found that trees with long-term AOD symptoms might have become predisposed many decades earlier. It was clear from one of our studies that some AOD-infected trees were unable to take full advantage of favourable growing conditions, resulting in less than optimal girth,

and that therefore historical episodes of stress might have an impact on the future resilience of oaks to disturbance, and leave them more vulnerable to AOD.

Our research has also shown the importance of the link between environmental conditions and tree health and function. We have seen that a little localised acidification in soils around feeder roots (the rhizosphere) might be instigated by the trees themselves when they are under stress (for example, from acute oak decline), to help with water and nutrient uptake. However, if soil nutrition becomes very imbalanced and too acidic, it can be highly detrimental to the health of the trees.

We have also found that the bacteria that convert nitrogen into forms utilisable by plants are in a lower abundance in oak trees suffering AOD than in healthy trees, and this appears to be indirectly linked to soil acidification. Keeping soils healthy is vital to oak resilience.

Management and control

There is no cure for AOD, but we have produced **guidelines on managing the disease** for owners of affected trees. These guidelines are based on general biosecurity principles intended to reduce the risk of spreading the pathogenic (disease-causing) bacteria from affected trees to healthy trees.

Management strategies that target soil health by increasing the organic carbon around declining trees to increase pH and ammonia-oxidising bacteria (AOB) abundance might also help support declining oak trees. AOBs effect nitrification, which is the process of converting ammonium to nitrate, which trees take up.

Other general advice on biosecurity for tree managers is available on the **UK Government website**.

Our research

As part of a programme funded by the Department for the Environment, Food & Rural Affairs (Defra), our scientists have collaborated with scientists from universities and other respected research organisations, and other stakeholders, to investigate the causes, distribution and scale of AOD in the UK. This research was designed to help develop effective AOD management and prevention strategies, map the distribution of the disease in the UK, and predict the risk of spread of the disease.

The work has included:

- studies of the *Agrilus biguttatus* beetle to investigate its life cycle and behaviour, and to determine whether it plays a role in the disease, perhaps by spreading the causative bacteria;
- formal identification and characterisation of previously unknown bacteria isolated by Forest Research from symptomatic oak;
- investigations into the role of these bacteria in causing tissue death in affected oaks;
- development of rapid diagnostic tools to detect bacterial species;
- a systematic survey of a number of statistically selected sites in England and Wales;
- mapping symptomatic and unaffected trees in selected AOD sites;
- intensive monitoring of symptom development in individual trees; and
- spatial analysis of mapping and monitoring data to determine distribution and spread of this condition, levels of tree mortality and/or recovery, and changes in the severity of the condition within sites.

Our future research will look further into the links between soil properties, the rhizosphere microbiome and tree health. The rhizosphere is the region of soil or substrate that is directly influenced by root secretions and associated soil micro-organisms known as the root microbiome. The next step is to carry out controlled experiments to determine whether the acidification effect which we have observed acts as a mechanism driving AOD, or whether it's a consequence of AOD.

See '**Related materials**' below for links to more-detailed research material.

Origins and background

There have been several episodes of acute (rapid) oak decline and dieback in Great Britain since 1920. Most cases were in England.

Acute dieback of mature woodland oak first aroused widespread concern in England during the early 1920s. Damage was thought to begin with the defoliation of trees in early summer by caterpillars of the oak leaf roller moth (*Tortrix viridana*), an insect which was abundant in the years after World War 1.

By 1924 there were reports of oaks dying in alarming numbers in certain sections of the defoliated woods. However, just a year later many of the sickly oaks showed an improvement in condition, and this improvement coincided with a marked reduction in the populations of the moth. By the late 1920s, there were no further reports of serious oak dieback for more than 30 years.

Then in 1958 deaths of young pedunculate oak (*Quercus robur*) occurred in several woods near the Norfolk coast, but adjacent sessile oak (*Q. petraea*) was unaffected. Drought and exposure were thought to be important triggers of the decline, together with the effects of defoliating insects and mildew.

There were also accounts of damage in the early 1980s in Surrey and the Forest of Dean in Gloucestershire.

Another episode occurred from about 1989 to 1993. Trees reported to be most affected were in the Midlands and southern England, and ranged from 40 to 200 years old. About half were in woodland and half in parkland, but most were pedunculate oak. At some of the affected sites up to a quarter of the trees had dieback symptoms or died from oak decline.

It is not known exactly when the current episode, characterised by bleeding cankers, began, but the first cases might have been present in the 1980s or 1990s.

Related materials

- **Publication – Managing acute oak decline**
- **Article – oak declines** – New definitions and new episodes in Britain
- **Chronic oak dieback**
- **Paper – Microbiome and infectivity studies reveal complex polyspecies tree disease in Acute Oak Decline**
- **Types of oak decline**
- **Two-spotted oak buprestid (*Agrilus biguttatus*)**
- **Acute Oak Decline Popular Knowledge Exchange**
- **The dendroclimatic and dendrochronological background to Acute Oak Decline**

Contact

Dr Sandra Denman

Alternatively, enquiries may be addressed to our **Tree Health Diagnostic & Advisory Service** (THDAS). Note that there can be a fee charged for THDAS services.

Additional resources

- **Paper: Novel dendrochronological modelling demonstrates that decades of reduced stem growth predispose trees to Acute Oak Decline**
- **Tree Health Diagnostic and Advisory Service**

https://www.forestresearch.gov.uk/tools-and-resources/fthr/pest-and-disease-resources/acute-oak-decline/