



Appendix 3 – Photographs



Photograph 1 – T1



Photograph 2 – T2 showing superficial knot hole.



Photograph 3 – T3 showing basal stem cavity.



Photograph 4 – T3 showing tear-out at base of crown.



Photograph 5 – T4 showing ivy cover.



Photograph 6 – T5 showing hollow stem.



Photograph 7 – The crown of T6



Photograph 8 – T6 showing tear-out.



Photograph 9 – T6 showing tear-out.



Photograph 10 – T7 showing callus roll and ivy cover.



Photograph 11 – T8.



Photograph 12 – T8 showing cavity created by broken branch.



Photograph 13 – The crown of T9.



Photograph 14 – T9 showing lateral branch cavity.



Photograph 15 – T10 showing vertical branch cavity.



Photograph 16 – T10 showing tear-out on horizontal branch.



Photograph 17 – T10 showing knot-hole on horizontal branch.



Photograph 18 – T11.



Photograph 19 – T11 showing vertical callus-roll.



Photograph 20 – T12.



Photograph 21 – T12 showing knot-hole on branch elbow.



Photograph 22 – The crown of T13.



Photograph 23 – T14.



Photograph 24 – T14 showing stem cavity.



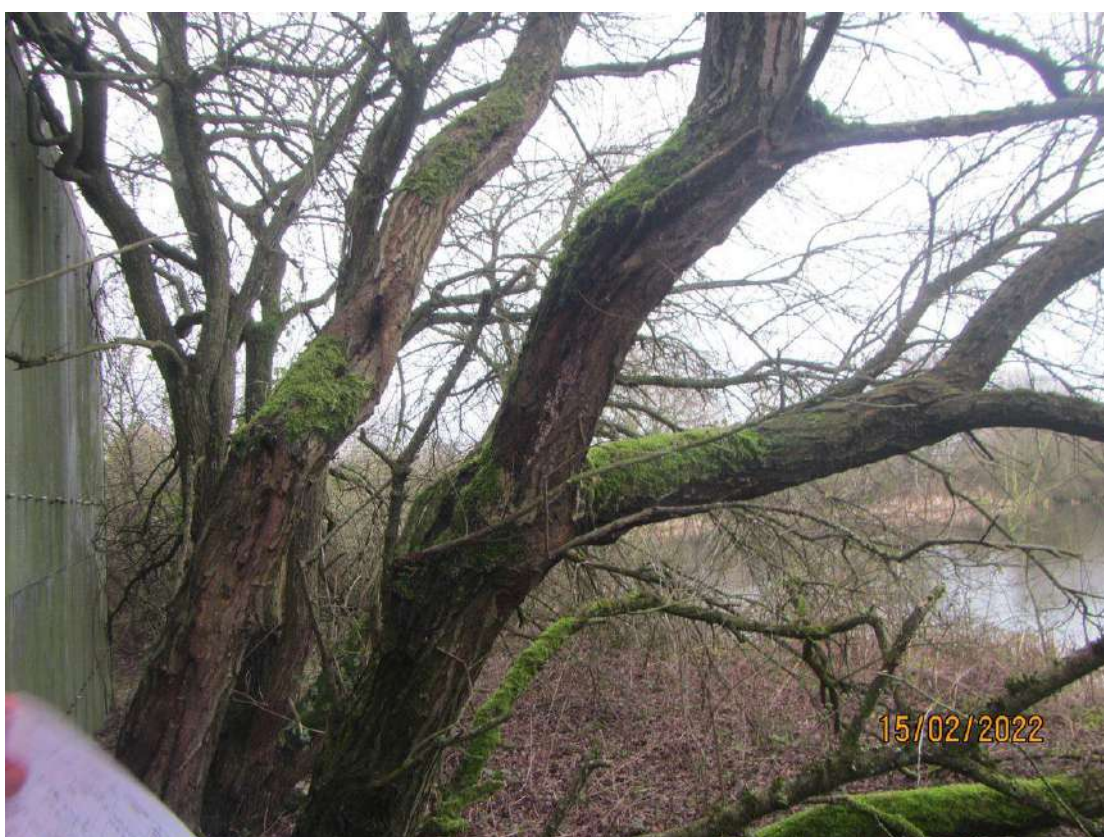
Photograph 25 – T14 showing cluttered vertical tear-out.



Photograph 26 – T15 showing ivy cover on trunk and some limbs.



Photograph 27 – T15 showing exposed heartwood.



Photograph 28 – T16 showing superficial branch cavity.



Photograph 29 – T17 showing ivy cover.



Photograph 30 – T18.



Photograph 31 – T19 showing crevice created where ivy meets bark.



Photograph 32 – T20 showing knot-hole and flaking bark.



Photograph 33 – T20 showing large knot-hole on horizontal branch elbow.



Photograph 34 – T21.



Photograph 35 – T22 showing basal stem cavity.



Photograph 36 – T23 showing tear-out from trunk (above pruning-cut).



Photograph 37 – T23 showing cavity in pruning-cut.



Photograph 38 – T24 (right).



Photograph 39 – T24 showing diagonal trunk cavity.



Photograph 40 – T25 showing ivy cover.



Photograph 41 – T26.



Photograph 42 – T26 showing woodpecker hole.



Photograph 43 – T26 showing woodpecker hole (upper right) and hollow branch (lower centre).



Photograph 44 – T27.



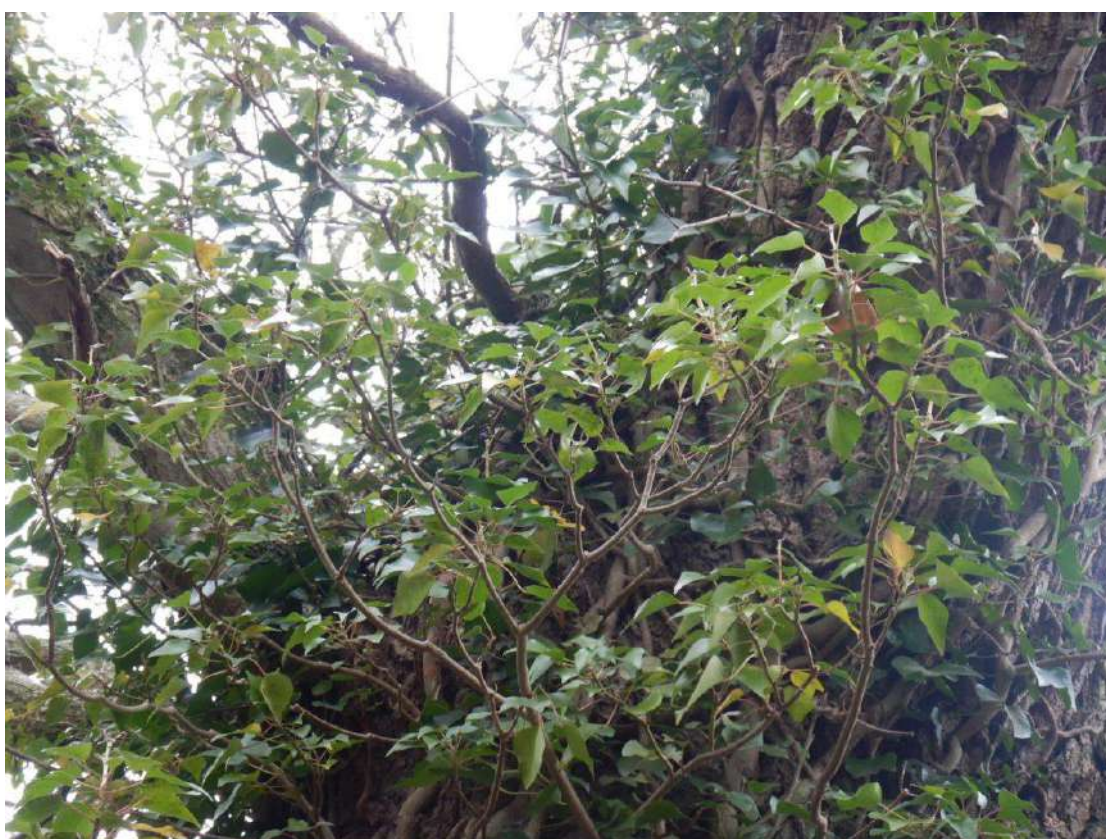
Photograph 45 – T27 showing horizontal branch cavity.



Photograph 46 – T27 showing branch weld.



Photograph 47 – Crown of T28.



Photograph 48 – T28 showing dense ivy cover at trunk fork.



Photograph 49 – T29 showing clutter by surrounding scrub.



Photograph 50 – T29 showing stem cavity.



Photograph 51 – T30 (left, rear).



Photograph 52 – Crown of T31.



Photograph 53 – T31 showing basal stem cavity.



Photograph 54 – T31 showing multiple stem cavities in exposed heartwood.



Photograph 55 – T32 showing trunk v-split.



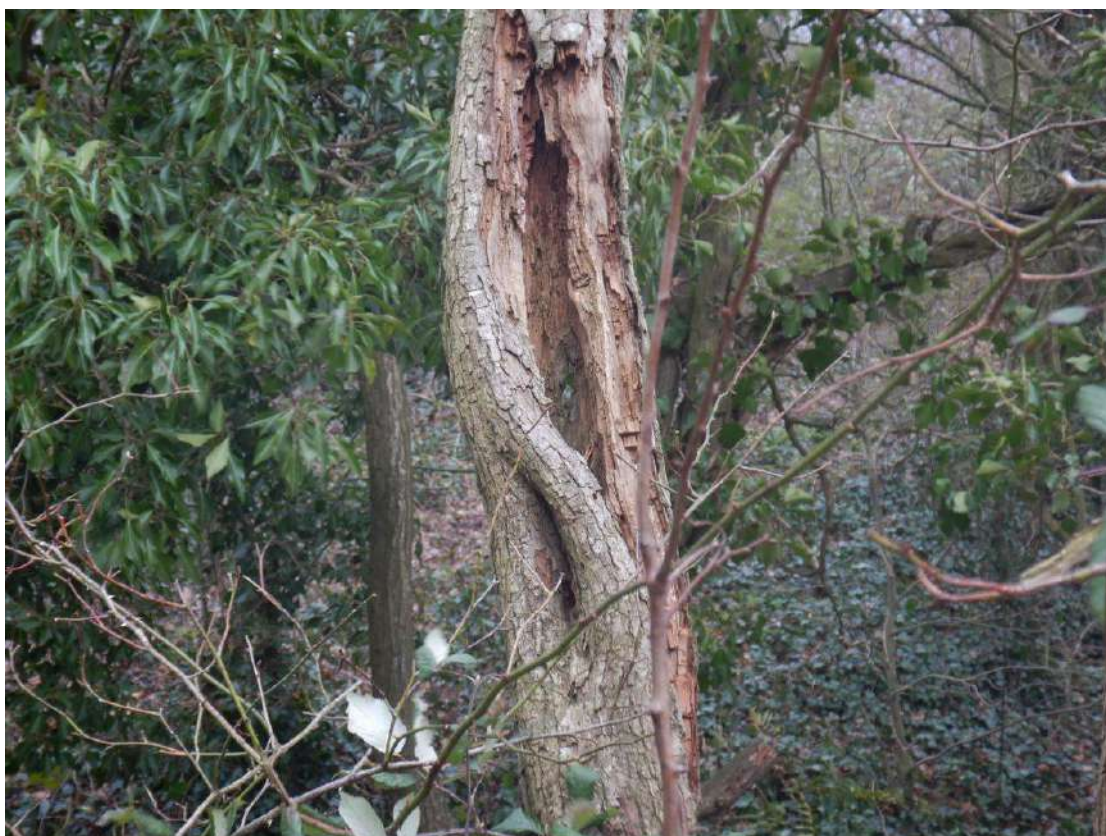
Photograph 56 – T32 showing v-split lateral stem cavity.



Photograph 57 – T32 showing split deadwood branch (centre, rear).



Photograph 58 – T33.



Photograph 59 – T33 showing vertical stem cavity.



Photograph 60 – T34.



Photograph 61 – T34 showing deadwood on northern aspect.



Photograph 62 – T34 showing deadwood on southern aspect.



Photograph 63 – T34 showing deadwood on northern aspect.



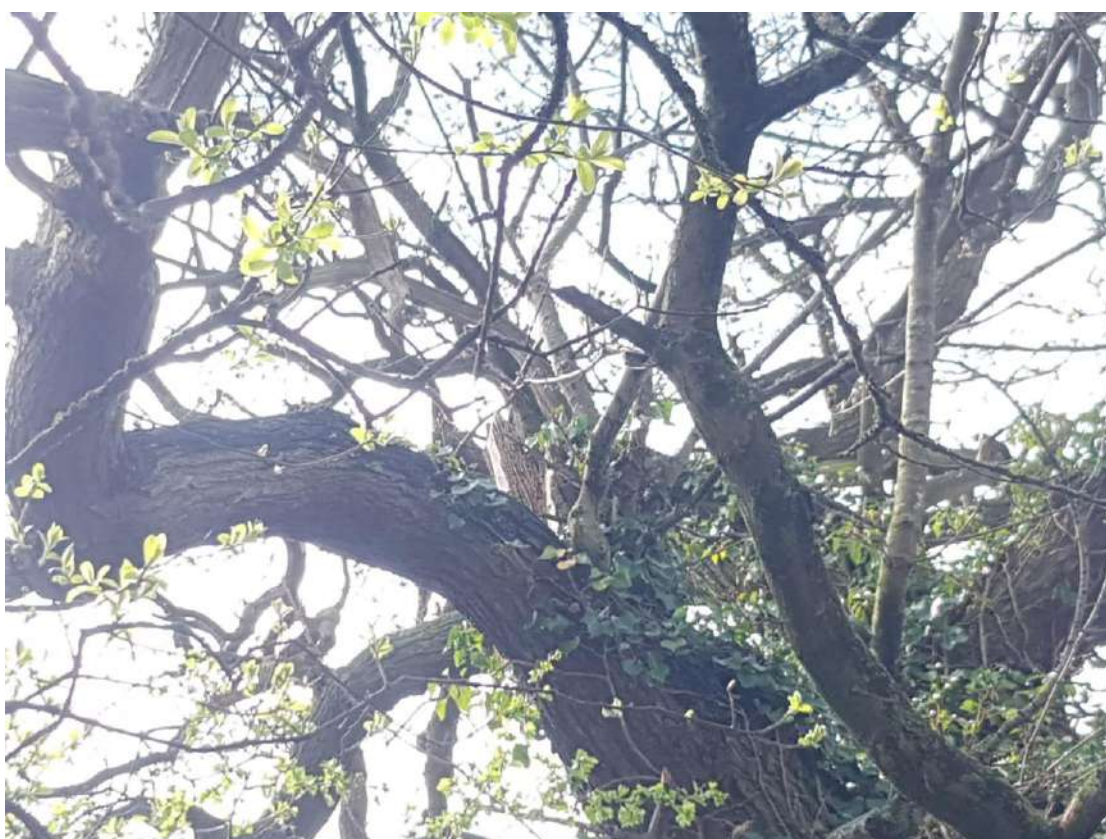
Photograph 64 – T35.



Photograph 65 – T35 showing stem cavity.



Photograph 66 – T35 showing deadwood on southern aspect.



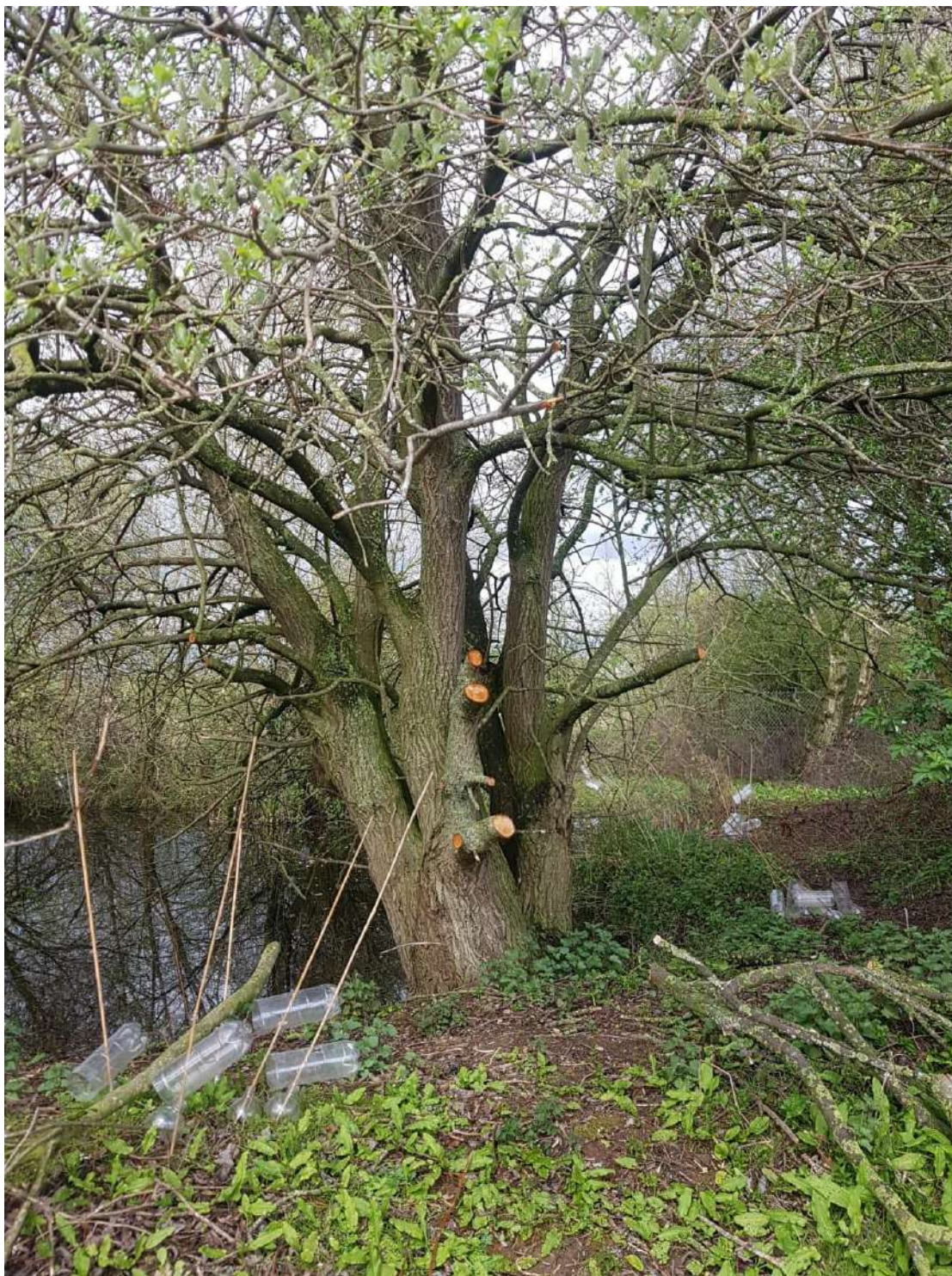
Photograph 67 – T35 showing deadwood on eastern aspect.



Photograph 68 – T35 showing deadwood on western aspect.



Photograph 69 – T35 showing deadwood and knot hole on western aspect.



Photograph 70 – T36.



Photograph 71 – T36 showing stem cavity.



Photograph 72 – T37.



Photograph 73 – T37 showing fissures in stem.



Photograph 74 – T38.



Photograph 75 – T38 showing fissures in stem.



Photograph 76 – T39.



Photograph 77 – T39 showing basal stem cavity.



Photograph 78 – T39 showing branch cavity.



Photograph 79 – T39 showing weld.



Photograph 80 – T40 showing ivy cover.



Photograph 81 – T40 showing stem cavity.



Photograph 82 – T41.



Photograph 83 – T42 showing ivy cover.



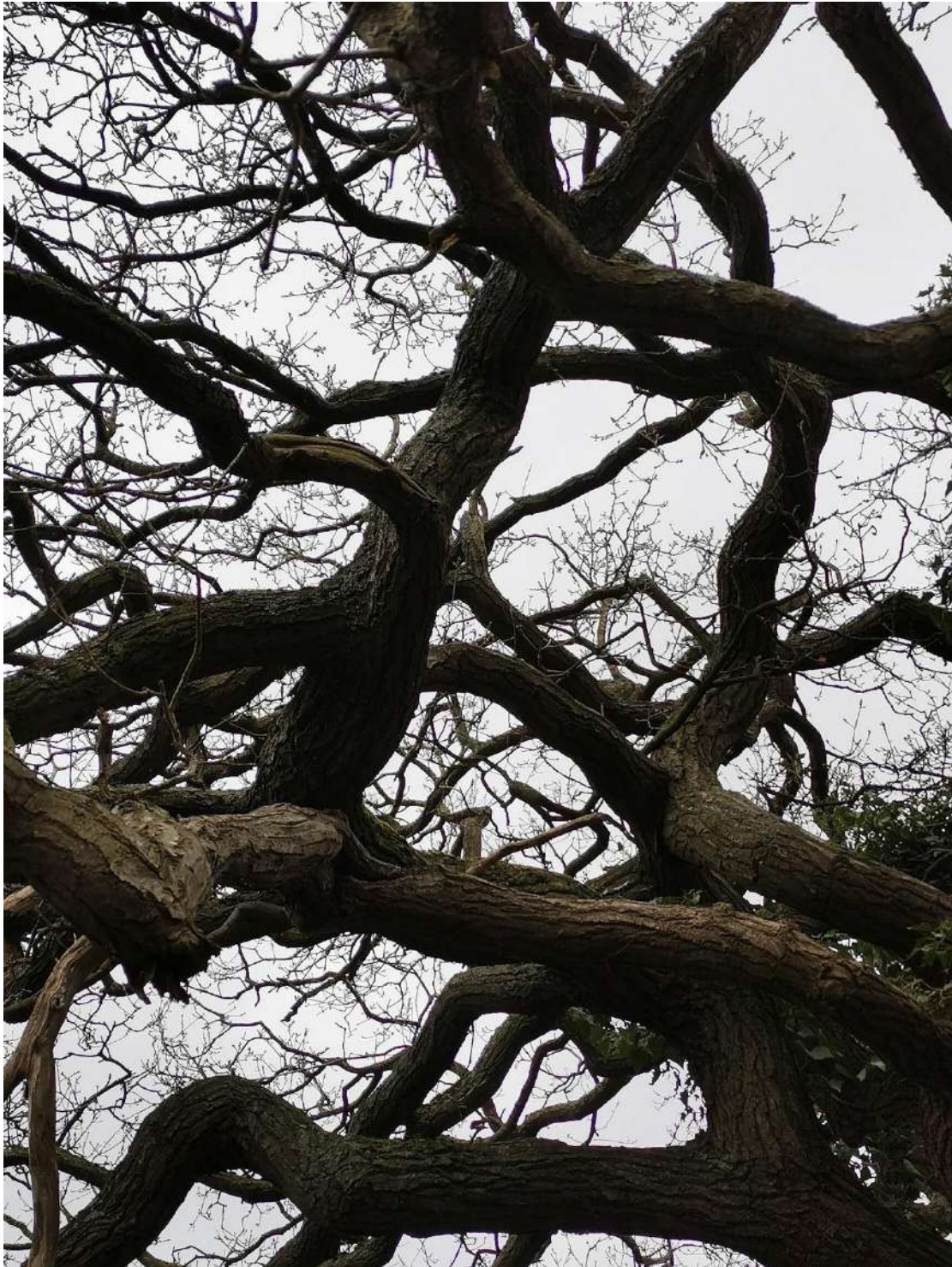
Photograph 84 – T43 showing ivy cover.



Photograph 85 – T44.



Photograph 86 – T44 showing knot-hole beneath ivy cover.



Photograph 87 – T44 showing welds.



Photograph 88 – T45.



Photograph 89 – T45 showing missing bark.



Appendix 4 – External lighting guidance

Lighting scheme in relation to bats

The two most important features of street and security lighting with respect to bats are:

1. The UV component. Low or zero UV installations are preferred to reduce attraction of insects to lighting and therefore to reduce the attraction of foraging bats to these areas.
2. Restriction of the area illuminated. Lighting must be shielded to maintain dark areas, particularly above lighting installations, and in many cases, land adjacent to the areas illuminated. The aim is to maintain dark commuting corridors for foraging and commuting bats. Bats avoid well lit areas, and these create barriers for flying bats between roosting and feeding areas.

UV characteristics:

Low

- Low pressure Sodium Lamps (SOX) emit a minimal UV component.
- High pressure Sodium Lamps (SON) emit a small UV component.
- White SON, though low in UV, emit more than regular SON.

High

- Metal Halide lamps emit more UV than SON lamps, but less than Mercury lamps
- Mercury lamps (MBF) emit a high UV component.
- Tungsten Halogen, if unfiltered, emit a high UV component
- Compact Fluorescent (CFL), if unfiltered, emit a high UV component.
- Variable
- Light Emitting Diodes (LEDs) have a range of UV outputs. Variants are available with low or minimal UV output.
- Glass glazing and UV filtering lenses are recommended to reduce UV output.

Street lighting

- Low-pressure sodium or high-pressure sodium must be used instead of mercury or metal halide lamps. LEDs must be specified as low UV. Tungsten halogen and CFL sources must have appropriate UV filtering to reduce UV to low levels.
- Lighting must be directed to where it is needed and light spillage avoided. Hoods must be used on each lamp to direct light and contain spillage. Light leakage into hedgerows and trees must be avoided.
- If possible, the times during which the lighting is on overnight must be limited to provide some dark periods. If the light is fitted with a timer this must be adjusted to reduce the amount of 'lit time' and provide dark periods.

Security and domestic external lighting

The above recommendations concerning UV output and direction apply. In addition:

- Lighting should illuminate only ground floor areas. Light should not leak upwards to illuminate first floor and higher levels.
- Lamps of greater than 2000 lumens (150 W) must not be used.
- Movement or similar sensors must be used. They must be carefully installed and aimed, to reduce the amount of time a light is on each night.
- Light must illuminate only the immediate area required, by using as sharp a downward angle as possible. Light must not be directed at or close to bat roost access points or flight paths from the roost. A shield or hood can be used to control or restrict the area to be lit.
- Wide angle illumination must be avoided as this will be more disturbing to foraging and commuting bats as well as people and other wildlife.
- Lighting must not illuminate any bat bricks and boxes placed on buildings, trees or other nearby locations.



Appendix 5 – Statutory and planning context

STATUTORY AND PLANNING CONTEXT

Ecological assessments

Ecological assessments play an important part within the planning context; they include an initial assessment which highlights any specific interests of a site. From the initial site assessment, the surveyor assesses the suitability of habitats within the site to support protected species and makes recommendations for further survey works if required. The following paragraphs provide a brief interpretation of the legislative protection that is relevant to the findings of this report.

Habitats

Section 7 of the Environment Act (Wales) places a duty on Welsh Ministers to publish, review and revise lists of types of habitats and species in Wales which they consider are of key significance to sustain and improve biodiversity. The Welsh Ministers must also take all reasonable steps to maintain and enhance the habitats published in these lists, and encourage others to take such steps.

Bats

In the United Kingdom, all species of bat and their roosts are afforded full protection under the Wildlife and Countryside Act 1981 (as amended) and the Conservation of Habitats and Species Regulations 2017 (known as the “Habitats Regulations”). The Wildlife and Countryside Act is the domestic implementation of the Convention on the Conservation of European Wildlife and Natural Habitats (the Bern Convention) and was amended by the Countryside and Rights of Way Act 2000. This makes it an offence to:

- Deliberately, intentionally or recklessly kill, injure or capture a bat
- Deliberately, intentionally or recklessly disturb a bat while it is occupying a structure or place that it uses for shelter or protection
- Deliberately, intentionally or recklessly damage, destroy or obstruct access to any place that a bat uses for shelter or protection (even if the bat is not present at the time)
- Keep, transport, sell or exchange, or offer for sale or exchange any live or dead bat, any part of a bat or anything derived from a bat

Under UK law, a bat roost is *any structure or place which any wild [bat] ... uses for shelter or protection*. As bats often reuse the same roosts, legal opinion is that a roost is protected whether or not the bats are present at the time of the activity taking place.

Penalties for offences include unlimited fines (formerly up to £5000), plus up to six months imprisonment, for each offence committed.

If an activity is likely to result in any of the above offences, a licence can be applied for to derogate from the protection afforded. These licences must provide appropriate mitigation and are issued by NRW.

The Environment (Wales) Act 2016 also lists the following bat species as species of principle importance under Section 7:

- Barbastelle *Barbastella barbastellus*
- Bechstein's bat *Myotis bechsteinii*
- Noctule *Nyctalus noctula*
- Common pipistrelle *Pipistrellus pipistrellus*
- Soprano pipistrelle *Pipistrellus pygmaeus*
- Brown long-eared bat *Plecotus auritus*
- Greater horseshoe *Rhinolophus ferrumequinum*
- Lesser horseshoe *Rhinolophus hipposideros*

Birds

All wild birds, their nests and young are protected throughout England and Wales by the Wildlife & Countryside Act 1981 (as amended). It is illegal to kill, injure or take any wild bird, or damage or destroy the nest or eggs of breeding birds. The legislation applies to all bird species, common and rare.

In addition to the protection afforded to all wild birds, more vulnerable species listed on Schedule 1 of the Act receive enhanced protection when breeding. Schedule 1 species, including their dependent young, are protected from intentional or reckless disturbance whilst at or near the nest, in addition to the protection afforded the more common species.

The Environment (Wales) Act 2016 offers further protection to the nests of some species that regularly re-use their nests, even when the nests are not in use.

The leading governmental and non-governmental conservation organisations in the UK have reviewed the population status of 244 UK bird species. "Birds of Conservation Concern 4: the Red List for Birds" is the most recent publication summarising their findings. Three lists, Red, Amber and Green, have been produced based on the most up-to-date evidence available and criteria include conservation status at global and European levels and, within the UK: historical decline, trends in population and range, rarity, localised distribution and international importance. These lists are a valuable resource when considering conservation priorities.

Planning Policy

National planning guidance is issued in the form of Planning Policy Wales (PPW - 2018). The most relevant sections are included in Chapter 6: Distinctive and Natural Places. This chapter details the policies on issues such as the protection of trees, woodlands, species, and designated sites. The document is free and available to view online