

Tree *Rad*ar GPR

Badger Activity Investigations



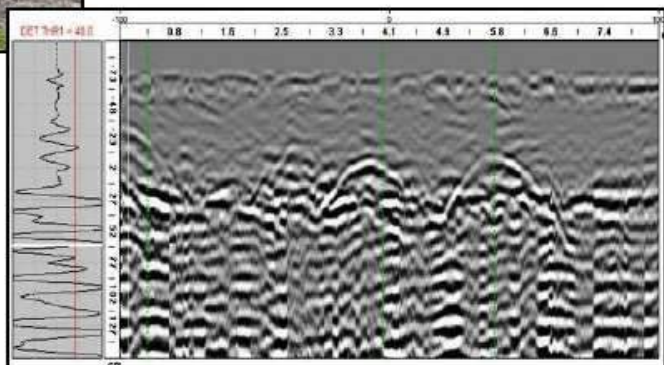
- Investigate extent of badger runs adjacent to sets, it's non-invasive!
- Get informed advice on the potential for and extent of underground badger activities.

- High degree of accuracy
- Locates potential location of badger activity (underground voids)



- Equipment verified on known tunnel structure of artificial setts.
- Voids can be measured for applicability.

- Annotated Radargram visuals (Printouts) and Short reports provided.



PBA Consulting provides Ground-Penetrating Radar (GPR) services for the location of tree roots and badger runs.

The accuracy and detailed information provided through the use of “TreeRadar” GPR is effective in locating underground voids (potential badger runs).

“TreeRadar” is normally used for ground scanning, to non-invasively locate and plot tree roots; it operates on standard GPR hardware; bespoke software is used to analyze the GPR data.

The unique reflective “signature” of subsurface voids is also identifiable - with the software these voids can be measured and plotted.



Analysis

Through the tree root analysis procedure, PBA Consulting has become experienced in interpreting radargrams. We have become knowledgeable in identifying other features that have unique reflective qualities including buried artefacts, metal reflectors (services), past soil cultivations and voids; consequently we are able to provide unique and informed advice on the subsurface root zone environment, including potential badgers' runs.



The radargram printouts readily show voids of around 300mm diameter; these have unique reflective qualities – a distinctive inverse hyperbolic shape that reverberates down the profile.

By assessing site conditions and the radargram printouts, PBA Consulting are able to apply the unique signature for voids of a size attributable to badger activities (runs).

Reports

A short report with radargram schematics can be provided to show the presence of voids/potential for badger activity/non-activity.*

Background to TreeRadar GPR

Ground-Penetrating Radar is an established technique and has been used worldwide for over 30 years to locate objects underground such as pipes, barrels, drums including engineering and environmental targets.

The use of GPR instrumentation for subsurface structural tree root mapping is an innovative and recent application to the arboricultural industry; it has been developed and patented by TreeRadar™, Inc.

When an electromagnetic wave emitted from a small surface transmit antenna, travels through the soil and encounters a boundary between objects with different electromagnetic properties it will reflect, refract, and/or diffract from the boundary in a predictable manner and produces a unique radargram pattern.

The electromagnetic differences between tree roots and the surrounding soil matrix provide unique contrast and reflection properties that are detected by TreeRadar GPR; soil voids also have unique reflective properties.

- The results cannot be guaranteed. Reports are provided for clients' information only and any information used is at clients' sole risk and without any implied responsibilities to PBA Consulting.