QTRA Quantified Tree Risk Assessment

Simply Balancing Risks With Benefits

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Title: QTRA Training - including Estimating Probability of Failure

Venue: As scheduled on the QTRA website (www.qtra.co.uk)

Date: A two-day training event - various dates as scheduled on the QTRA website

Learning Objectives: The attendee will:

- develop a general understanding of the risk context within which the structural condition of trees is considered
- develop an understanding of the Quantified Tree Risk Assessment (QTRA) method and be able to apply it to the risk assessment of groups of trees and individual trees
- be instructed in the use of the QTRA manual calculator, which will be provided to all trainees
- be instructed in the use of the QTRA calculator program, which will be provided to all trainees who successfully complete the training
- calibrate their 'Likelihood of Tree Failure' estimates with other trainees
- be able to inform risk management decisions using the QTRA Risk Thresholds
- develop a repeatable approach to the assessment of tree structure from the broad assessment of a tree population to the investigation of a tree
- develop an understanding of those attributes of the tree that inform the recognition and evaluation of tree structure, stability, and tree health in relation to tree structure
    - physiological condition and Indicators of vitality
    - basic anatomy of wood tissues and of vascular connectivity
    - structural optimisation in trees
    - compartmentalisation of decay and dysfunction
- develop an understanding of environmental factors that might affect tree structure, their visible indicators and possible consequences
- recognise external indicators of structural modifications in the tree, e.g.
    - decay
    - compensatory growth in the form of both primary shoot development and secondary thickening
- develop a general understanding of the principles that inform evaluation of visual observations in relation to differing fungal decay strategies

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- An introduction to tree risk assessment

Indoor sessions:

- The components of a Quantified Tree Risk Assessment
  - assessing and categorising land-use
  - considering the potential effects of impacts from trees and branches
  - taking a structured approach to estimating likelihood of tree and branch failure
  - calculating the annualised Risk of Harm from trees and branches
- Considering the costs and benefits of risk control measures when making risk management decisions
- The value and importance of risk management policy
- A range of worked examples
- General structural properties of wood in angiosperm and gymnosperm trees
  - basic anatomy of wood tissues
  - vascular connectivity in trees
  - compartmentalisation of decay and dysfunction
  - structural optimisation and compensatory growth in trees
  - compression wood, tension wood, normal wood
- The effects of environmental change on the health, stability and structural condition of trees
- General principles of fungal decay in trees and the effects on tree structure
- Modes of tree failure

Outdoor sessions:

- Assessing and categorising land-use
- Carrying out a QTRA to calculate the risk of harm from individual trees and inform management decisions
- Assessing populations and groups of trees in relation the surrounding land-use
- Carrying out and recording a QTRA walkover assessment of a group or of trees to inform management decisions
- Assessing tree structure and tree stability
- Assessing and estimating likelihood of tree failure

Testing: Before being issued with a registration certificate, the trainee will be required to complete an open book test in their own time and within one week of attending the training. The test will comprise a range of multiple choice questions designed to establish the trainee's level of understanding of the method and its application.

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