

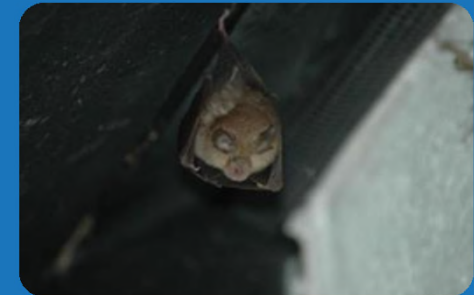
WILDLIFE: BUGS, BEAST AND BIODIVERSITY



WILDLIFE: BUGS, BEAST AND BIODIVERSITY

- In the UK:
 - Over 70,000 species and Over 1,000 habitats
- No. species with special protection (2% - 1,272):

➤ Birds	603
➤ Invertebrates	400
➤ Plants	186
➤ Mammals	54
➤ Reptiles & Amphibians	17
➤ Fish	12



WILDLIFE: BUGS, BEAST AND BIODIVERSITY

- Protection...?
 - Range Sale and possession through to killing
- Ramifications...?
 - Equipment and plant forfeited.
 - Fines up to £5,000 per action.
 - Prison up to 6 months per action.



WILDLIFE: BUGS, BEAST AND BIODIVERSITY

- **Who is Responsible...?**
 - **Company, Director, Project Manager, Estimator, Designer, Site Supervisor, Project team, sub-contractor**
 - **All equally liable!**

- **When...?**
 - **Project start to finish**
 - **Occasionally after project completion**

WILDLIFE: WATER VOLE

- **Protection**

- **Disturbance or Destruction of individual or burrow.**

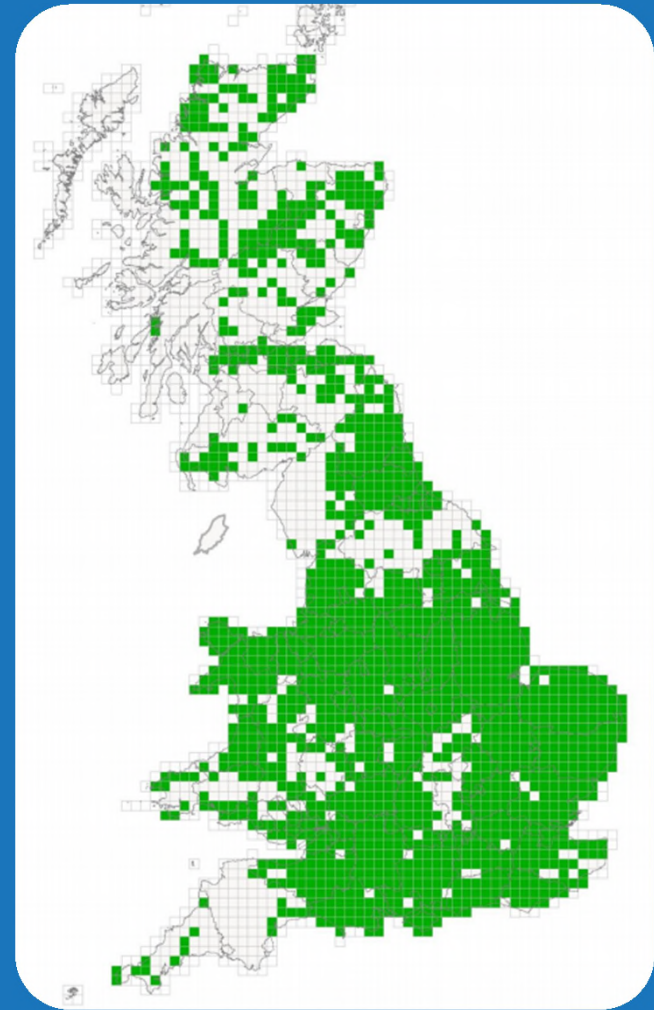


- **Recognition**

- **Rat-size (140-220mm; tail 95-140mm)**
- **Blunt nose; dark chestnut-brown to black fur; short rounded ears; hair-covered tail**

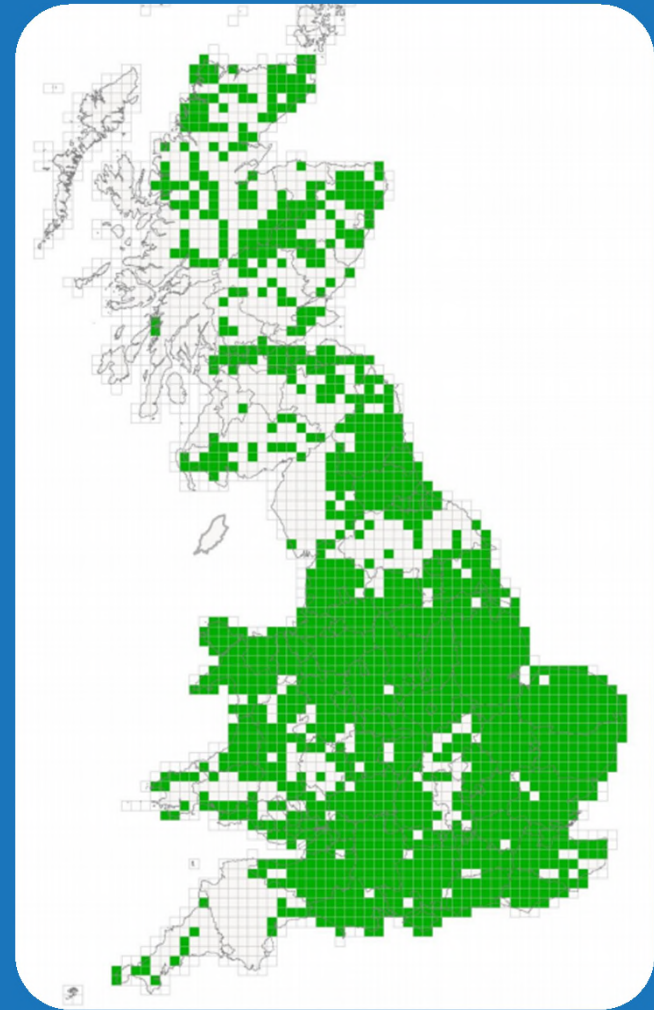
WILDLIFE: WATER VOLE

- Where...?
 - Throughout Britain
(less common on higher ground)
 - Slow flowing rivers, streams, ditches, lakes, reed-beds, marshes and ponds



WILDLIFE: WATER VOLE

- How...?
 - Desk based assessment:
 - Historic Record (ALERC)
 - NBN Atlas
 - Field Survey
 - Site visit by qualified ecologist



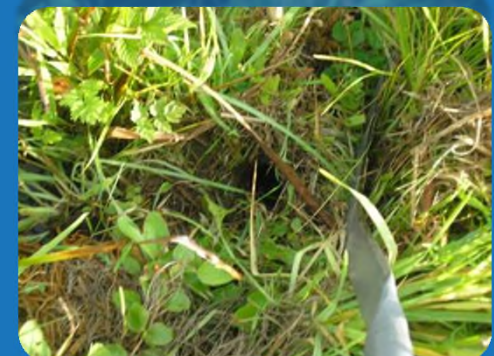
WILDLIFE: SURVEY

- What...?
 - Burrows
 - Feeding Signs
 - Droppings
 - Nests
 - Footprints
 - Individuals



WILDLIFE: SURVEY

- **Burrows**
 - Underground system within banks
 - Openings above and below water
 - Runways/entrances up to 2m from water
 - Entrances generally clean
 - Confirm when combined with other signs
- **Nests**
 - Above ground within vegetation



WILDLIFE: SURVEY

- **Feeding Signs**

- Vegetarian diet (mostly)
- Over 230 different plants
- Neat feeding piles
- Vegetation sections 8cm long with 45 degree end cuts
- Lawns around burrows



WILDLIFE: SURVEY

- **Droppings/latrines**

- **12mm long by 5mm wide; blunt ends**

- **Tic-Tac**

- **Colour depends on diet light green to dark purple/black**



WILDLIFE: SURVEY

- **Footprint**
 - Up to 34mm long
 - Forefoot leaves a star-shaped print



WILDLIFE: WHEN...?

- **Main Field Survey Season**
 - April to September – All signs
 - Between 1 and 5 surveys
- **Sub-optimal Survey Season**
 - October to March – Burrows only

WILDLIFE: WHEN...?

- Project Planning and Execution
 - Initial Discussions
 - Preliminary Assessment
 - Design (Including RAMS)
 - Site set-up (RAMS)
 - Project execution



WILDLIFE: EXAMPLES

- **Watercourse re-profiling**
 - **Field survey of working area plus 200m up and down stream**

- **Bankside revetment**
 - **Field survey of working area plus 500m up and down stream**