



# Wildlife in construction

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# Content

A pig is shown lying down, wearing a white protective cone (E-collar) around its neck. The pig's face is visible, and it appears to be resting on a light-colored, textured surface. The background is dark and out of focus.

- How does development and construction interact with wildlife
  - Controls in place to manage the issue
  - Impacts to construction arising from this
  - How to live happily together!
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- Discussion and questions



# Why is wildlife such a big deal?

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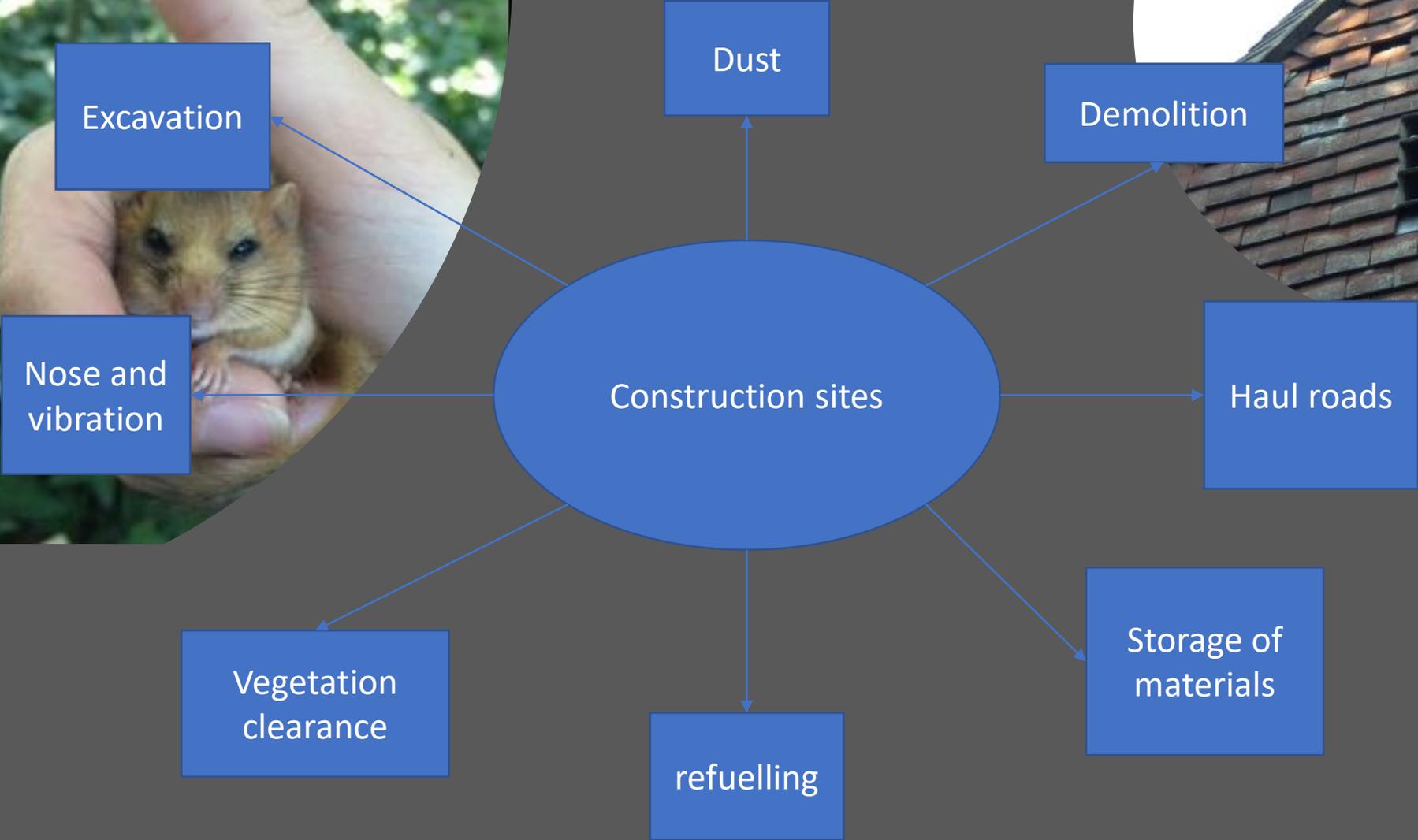
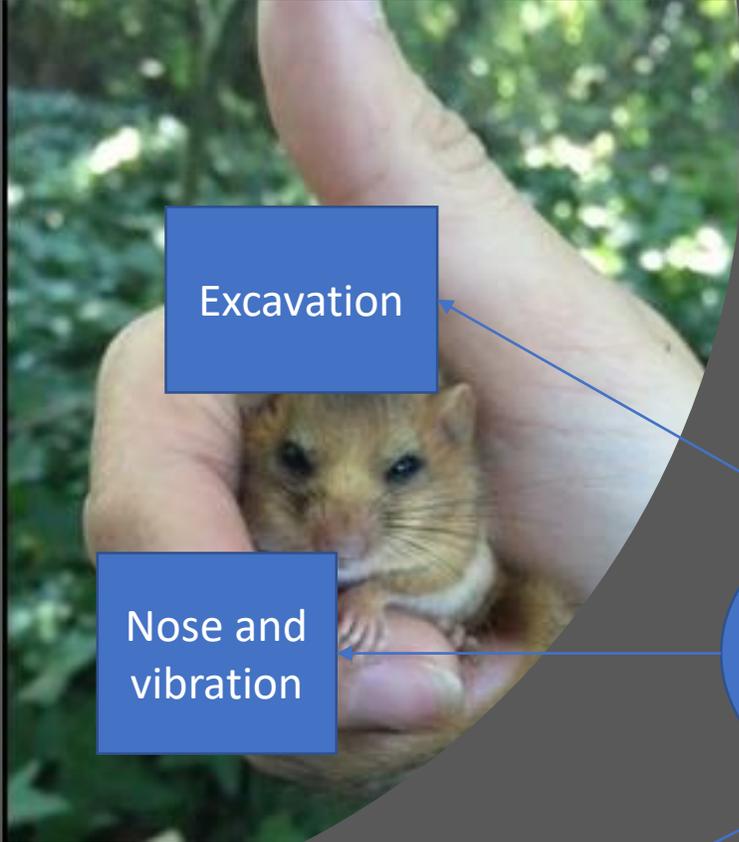
- Declining areas of habitats, and numbers of species
- Animals that are important to wider ecosystem
- Iconic species lost

With due consideration, careful planning and professional help wildlife should not be considered a block to development or undertaking work to your site

# Design of development

- Loss of habitat
- Fragmentation
- Disturbance
- Loss of surface water drainage







# Legislation, Policy, Guidance

- Conservation (of Habitats and Species etc.) Regulations 2010
- Wildlife & Countryside Act 1981 as amended
- Natural Environment & Rural Communities (NERC) Act 2006
  - Duty to conserve and enhance biodiversity
- Govt Circular 06/2005 – Biological & Geological Conservation
- NPPF 2012
- Natural England Standing Advice
- Local Plan Policy
- Local and UK Biodiversity Action Plans (BAPs)

# Habitats Directive

For European protected species, a licence is required for disturbance. An EPS licence can only be granted if the development proposal is able to meet three tests:

1. the consented operation must be for ‘preserving public health or public safety or other **imperative reasons of overriding public interest** including those of a social or economic nature and beneficial consequences of primary importance for the environment’; (Regulation 53(2)(e))
2. there must be ‘**no satisfactory alternative**’ (Regulation 53(9)(a)); and
3. the action authorised ‘will not be detrimental to the maintenance of the population of the species concerned at a **favourable conservation status** in their natural range’ (Regulation 53(9)(b)).



# SSSI Assents

- All SSSIs have a list of Operations Likely to Damage
- Works within or near to SSSIs that fall under this list of operations **MUST** seek an assent from Natural England.
- Process includes an ecological assessment (either desk or field, and short application form
- Method statements that control the scope and operation of the works need to be included
- Not required where works require planning assent

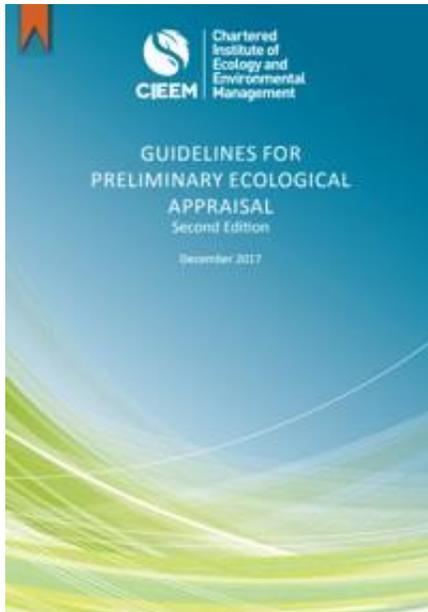


# Planning Applications

- Will proposal impact ecological features?
- Is survey justified?
- Minimum Phase I Ecological Survey
- Phase 2 surveys where required
- All needed prior to determination! (see Circular 06/2005)

# Professional help

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- Ecology is a highly technical subject
- Individual animals/habitat science complex
- Interaction to understand/predict impacts tricky
- Professional help; many different fields
- CIEEM

# Protected species and habitats

- Material consideration of planning. Surveys cannot be conditioned
- Needs to be embedded in a design for development
- Legal constraints remain outside of planning
- All work on site potentially issue. Feasibility, initial investigations, design, planning, construction, ongoing maintenance
- Avoidance, mitigation, enhancements

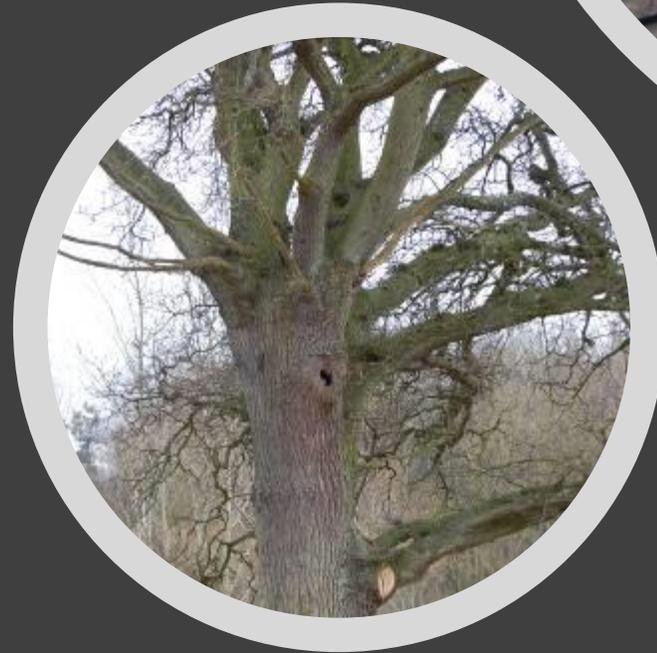


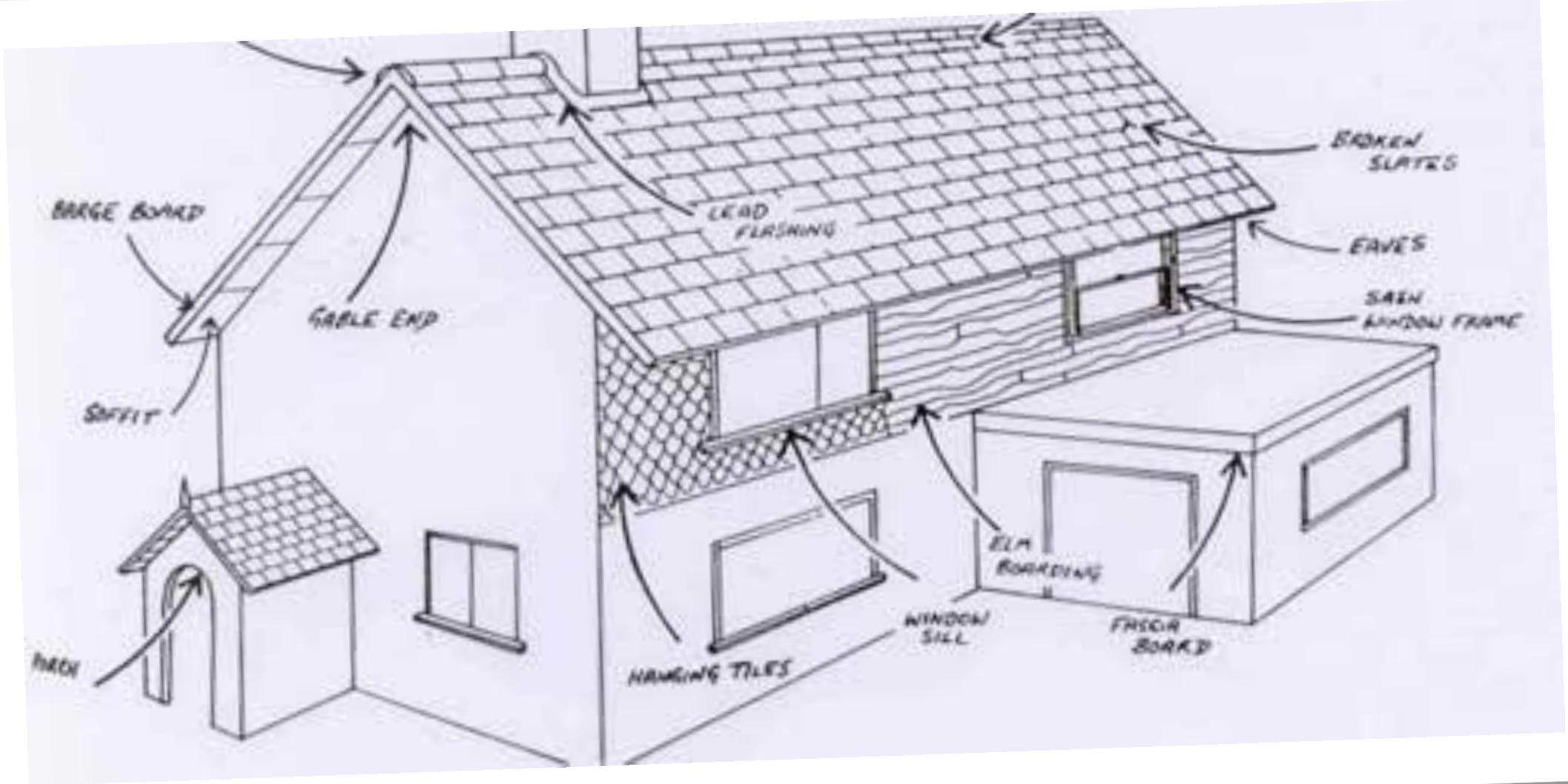
## Protected Species - triggers

- Bats
  - Buildings and trees
  - Based on 'reasonable likelihood'
- Badgers
  - Farmland, woodland, scrub, dense vegetation
- GCN
  - Waterbodies (still) within 500m radius
  - Suitable terrestrial habitat
- Reptiles
  - Brownfield sites, rough / bare ground, railways, allotments, cemeteries etc.
- Nesting birds
  - Denser vegetation (hedges, brambles), older buildings, garages etc.

## Bat Roosts

- Built Structures - buildings, bridges, walls, tunnels
- Trees – any tree that has a suitable feature – not necessarily large/mature or full of cracks
- Some broad requirements but any structure/tree has potential (modern/urban too)
- Roosts move seasonally – site can be important at any time of year
- One bat is a roost and a roost doesn't need to be occupied

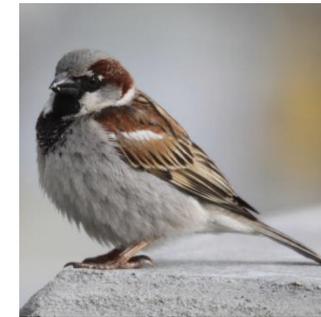




# Birds



- Several bird species will nest on/in buildings (sparrow, swift, owls, swallows)
- In rural/semi-rural habitats you may also have birds nesting on the ground (lapwing, skylarks)
- Garden, aquatic, hedgerow, scrub and woodland habitats will also support nesting habitats, and is the most common habitat to be lost through site development/maintenance
- All wild birds, their nests and eggs are legally protected
- Some species are afforded greater protection



## Birds – key points

- Limited range of species will occur within buildings; Risky areas are wall plates, soffits, fascia, cladding
- Some of those are highly protected e.g. barn owl
- Scrub, hedges and woodland are habitats most commonly impacted by development
- Field signs are usually very obvious + birds will let you know
- Ground nesting birds hardest to identify and rule out
- Outside March-end August normally safe (but roosting barn owl...)

# Badgers

- Familiar mammal species, widespread and generally common
- Can be v common in urban areas e.g. Gosport
- Woodland, scrub, grassland mix is ideal
- Live in extended family groups – several dozen animals possible
- Excavate complex burrow systems called setts
- Usually single main sett with numerous outliers and subsidiary setts



# Evidence...



# Great crested newts

- Rare across Europe – hence EU level protection
- UK considered an important ‘hot spot’ for the species
- As with all amphibians, breeding ponds are only used in spring time (adults) and until August (young)
- During Autumn and early winter they feed on invertebrates in woodland, hedgerows, marshes and tussocky grassland.
- Hibernate in winter underground, in roots of trees/hedgerows, old walls and piles of stone/bricks/compost



## GCN – key points

- Breed in ponds, not running water, and generally not where fish are known to live
- Animals can use an area up to 500m from their breeding ponds. Looks for connective grassland, woodland, hedgerows
- Individual animals and their habitats are protected
- Unlawful to disturb GCN or their breeding or resting places
- Greatest risk from ground works destroying terrestrial habitat, especially during winter

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This calendar has been developed by Seasons Ecology to help project managers, developers and planners understand and plan for seasonal constraints that protected species can pose to a development. An understanding can help you to avoid or at least prepare for any associated programme delays.

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Phase 1 habitat survey	Optimal											
Botanical / NVC	Not possible	Not possible	Not possible	Sub-optimal	Sub-optimal	Optimal	Optimal	Sub-optimal	Sub-optimal	Not possible	Not possible	Not possible
Badger – standard	Optimal											
Badger – bait-marking	Not possible	Sub-optimal	Optimal	Optimal	Not possible							
Bat – roost assessment	Optimal											
Bat – activity*	Not possible	Not possible	Not possible	Sub-optimal	Optimal	Optimal	Optimal	Optimal	Optimal	Sub-optimal	Sub-optimal	Sub-optimal
Bat – hibernation	Optimal	Optimal	Not possible	Optimal								
Dormouse – Nest tube	Not possible	Not possible	Not possible	Optimal	Not possible							
Dormouse – Nut searches	Not possible	Sub-optimal	Optimal	Optimal	Optimal	Optimal						
Otter	Optimal											
Water vole	Not possible	Not possible	Not possible	Sub-optimal	Optimal	Optimal	Optimal	Optimal	Optimal	Optimal	Not possible	Not possible
Breeding bird	Not possible	Not possible	Not possible	Optimal	Optimal	Optimal	Not possible					
Wintering bird	Optimal	Optimal	Optimal	Not possible	Optimal	Optimal	Optimal	Optimal				
Great crested newt – HSI**	Sub-optimal	Sub-optimal	Optimal	Optimal	Optimal	Optimal	Sub-optimal	Sub-optimal	Sub-optimal	Sub-optimal	Sub-optimal	Sub-optimal
Great crested newt – standard	Not possible	Not possible	Sub-optimal	Sub-optimal	Sub-optimal	Sub-optimal	Not possible					
Reptile – habitat suitability	Optimal											
Reptile – standard	Not possible	Not possible	Sub-optimal	Optimal	Optimal	Sub-optimal	Sub-optimal	Sub-optimal	Optimal	Sub-optimal	Not possible	Not possible
White-clawed crayfish	Not possible	Not possible	Not possible	Optimal	Not possible	Not possible	Optimal	Optimal	Optimal	Optimal	Not possible	Not possible
Invertebrates (a = aquatic only)	a	a	a	Not possible	a	a	a					

\* Emergence, swarming and transects

\*\* Habitat Suitability Index

Optimal survey season
  Sub-optimal survey season
  Surveys not possible

# 'Dealing with' ecology!

- START EARLY
  - Design-out issue
  - Realistic time scales and costs
- Understand all physical change that may happen on the site throughout the course of your works/development.
  - Vegetation clearance
  - Demolition/internal reconfiguration
  - Access creation
  - Tree works
  - Ground excavations
  - Additional lighting
- Undertake desktop or initial phase one, before funding is finalised
- Ensure that other investigations themselves will not commit offence; topo, GI, asbestos



# 'Dealing with' ecology!

- Have a physical survey undertaken early in the process
- Minimise the issues. Keep hedges, mature trees, nice buildings, bits of woodland!
- Listen to your experts and ensure any recommendations are taken on board across all design aspects.
- Be prepared to scale back development if areas of habitat need to be retained on site. Roll with the benefits of this!
- Stand alone assessment probably needed for most development including major maintenance EVEN WHERE NO PLANNING REQUIRED
- Ecology requirements don't stop at the permission stage.
  - Contract document
  - CEMP
  - Ecological clerk of works
  - Long term monitoring



## Delivering mitigation

Decisions should be guided by the 'Mitigation Hierarchy' ...

### 1. AVOID

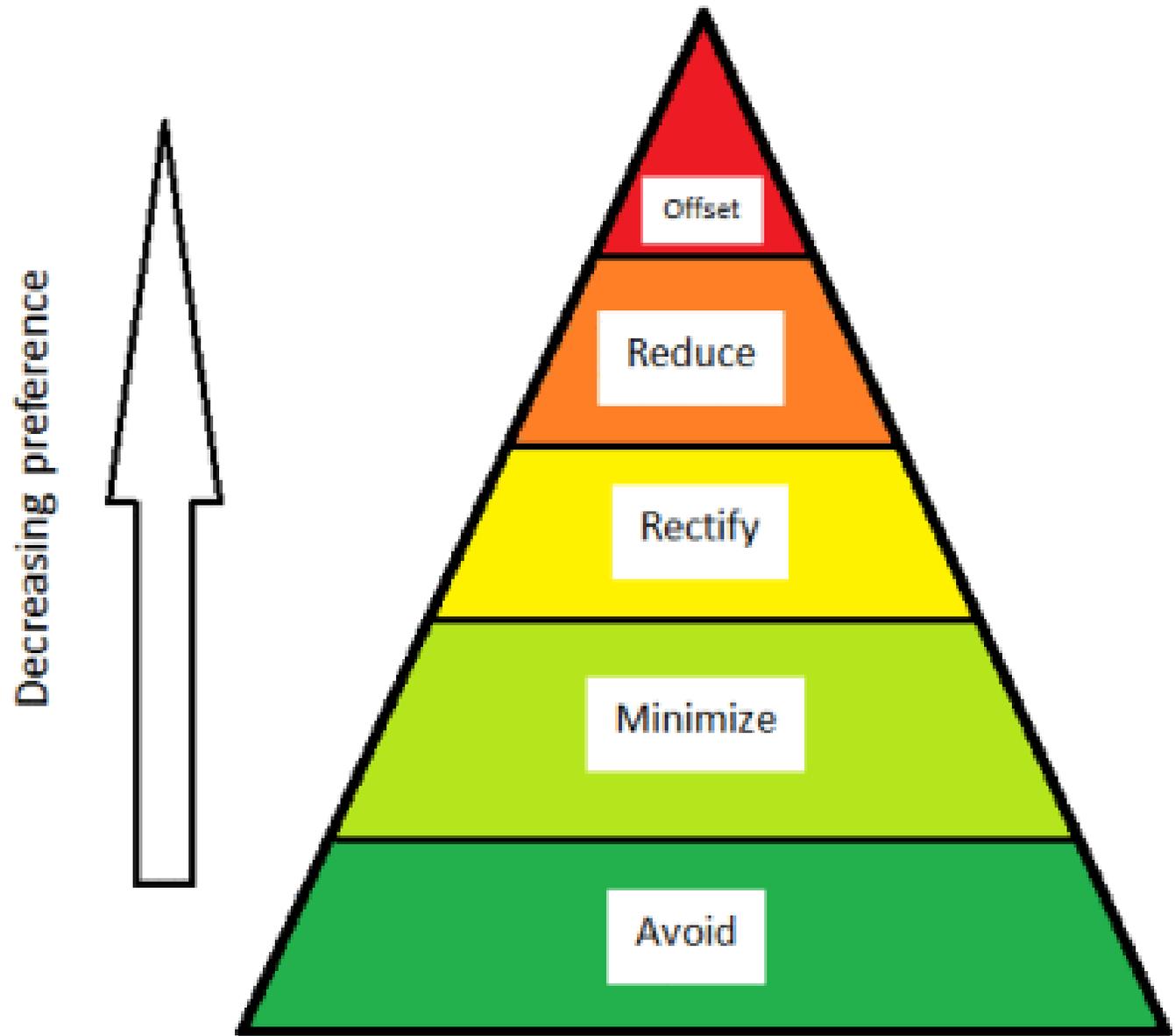
1. Can impacts be avoided altogether?
2. Avoid works to parts of building/site?
3. Avoid sensitive periods?

### 2. MITIGATE

1. Can works be done differently to minimise impacts?
2. Hand-cut vegetation? Hand-strip roof materials?

### 3. COMPENSATE

1. Minimum like-for-like habitat compensation.
2. Replacement roof void for bats?



Mitigation Hierarchy

# Delivering mitigation

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- Often time-bound
  - e.g. when bat roosts can be demolished
  - Removing reptile habitat whilst animals are active
  - Two-stage clearance for dormouse
- Legally constrained
  - Works have to be undertaken under license from Natural England
- Prior to commencement conditions!
- During construction
  - Method statements
- Long term management or monitoring



# Health & Safety

- Highly unlikely to be any significant health or safety implications from protected species
- Bats can carry European Bat Lyssavirus (a rabies-like virus)
- 11 bats only tested positive from 12,000 samples
- EBL is only spread through contact with bat saliva i.e. bites
- Bat droppings are not a health risk
- Bird droppings do harbour several nasty diseases
- There is no risk to humans from badgers
- As ever, good basic hygiene + PPE is effective prevention

**Any questions?**