

Indicator Species

Leicestershire,
Leicester and Rutland

Local Nature Recovery Strategy



Making Space for Nature

Indicator Species

The **100 Indicator Species** have been carefully selected to serve as vital tools for monitoring the health of the environment across Leicestershire, Leicester, and Rutland. Representing a range of taxonomic groups, including mammals, birds, invertebrates, amphibians, plants, and fungi, these species are distributed across all major habitats, from woodlands and grasslands to freshwater ecosystems and urban areas.

The concept behind indicator species is straightforward: they are representatives of habitats in good ecological health. When these species thrive, it suggests that their ecosystems are functioning well, and when their populations decline, it signals environmental stress or degradation. Therefore, tracking the trends in the populations of these species provides valuable insights into the state of biodiversity and ecological balance within the area.

Chosen for their relative ease of identification and their broad appeal to citizen scientists and conservationists, these species are not rare but are known to be in decline. This makes them reliable indicators of changing environmental conditions. Their population trends can help detect issues such as habitat loss, climate change impacts, pollution, and other pressures on biodiversity.

It is our hope that this list will be adopted in future initiatives, helping to create a unified approach to monitoring the state of nature in Leicestershire, Leicester, and Rutland. By tracking these indicator species over time, we can more effectively assess the success of conservation efforts and make informed decisions to support the recovery of local ecosystems.

Species selected are based on the following criteria:

- association with quality habitats (including species found in multiple habitats)
- firmly established in the Local Nature Recovery Strategy area but have declined or maintained a low base level over the last 10 years.
- recorded sufficiently frequently to provide adequate data for analysis.
- can be seen without specialist sampling and be identified without detailed examination.
- Come from a wide range of taxon groups.

The Indicator Species list includes species such as **Small Tortoiseshell Butterfly**, which are found in nettles and gardens; **Lesser Stag Beetle**, the largest beetle found in Leicestershire, Leicester and Rutland and is a good indicator of healthy woodland understorey; and, **Glow-Worm**, found in healthy species rich grassland, and can thrive along roadsides and many local wildlife sites.

Farmland birds such as **Linnet** and **Yellowhammer** have well established but declining populations. These birds are easily identifiable and improvements in their numbers could be attributed to well managed hedgerows and field margins in arable fields.

Swan Mussel is a good indicator for clean flowing water. These are known to be declining but will recover with improvements to water quality and good management.

By monitoring these species, the Local Nature Recovery Strategy aims to create a robust and sustainable framework for biodiversity conservation, ensuring that all species and their habitats are preserved for future generations.

Table:

Species marked with '1' indicate habitats they can be found in.

Species marked with 'X' indicate the species primary habitats where they are key indicators of habitat health.

	Taxon group	Species	Common name	Woodland - general	Woodland - deciduous	Woodland - coniferous	Woodland - ancient	Woodland - acidic	Woodland - margin/rides	Hedgerow	Scrub	Trees - specific	Verges, margins	Grassland - acid	Grassland - neutral	Grassland - calcareous	Heath	Marsh	Aquatic - still	Aquatic - flowing	Gardens	Open Mosaic Habitat	Urban	Farmland	General Biodiversity Indicator
1	Mammals	<i>Erinaceus europaeus</i>	Hedgehog						1	1											X				
2	Mammals	<i>Arvicola amphibius</i>	Water Vole																X	1					

3	Mammals	<i>Micromys minutus</i>	Harvest Mouse							1			X									1		
4	Mammals	<i>Neomys fodiens</i>	Water Shrew	1										1	X									
5	Mammals	<i>Mustela putorius</i>	Polecat	1	1					1												1	X	
6	Reptiles	<i>Zootoca vivipara</i>	Common Lizard						1								1				1		X	
7	Reptiles	<i>Natrix helvetica</i>	Grass Snake											1	X	1	1							
8	Reptiles	<i>Anguis fragilis</i>	Slow-worm		1				1	1				1			1						X	
9	Amphibians	<i>Rana temporaria</i>	Common Frog - spawn											1	X		1							
10	Amphibians	<i>Bufo bufo</i>	Common Toad - spawn		1				1						X		1							
11	Birds	<i>Passer domesticus</i>	House Sparrow														1		X		1			
12	Birds	<i>Apus apus</i>	Swift																		1		X	
13	Birds	<i>Delichon urbicum</i>	House Martin																		1		X	
14	Birds	<i>Tyto alba</i>	Barn Owl									1	1	1	1							1	X	
15	Birds	<i>Alauda arvensis</i>	Skylark									1	1	1									X	
16	Birds	<i>Carduelis cannabina</i>	Linnet											1									X	
17	Birds	<i>Emberiza citrinella</i>	Yellowhammer						1			1	1										X	
18	Fish	<i>Cottus gobio</i>	Bullhead														X							
19	Lepidoptera - Butterflies	<i>Aglais urticae</i>	Small Tortoisesh						1												1	1		X

			beetle							1	1	1	X	1	1	1												
33	Coleoptera - Beetles	<i>Lampyris noctiluca</i>	Glow-worm							1	1	1	X	1	1	1												
34	Coleoptera - Beetles	<i>Anisosticta novemdecimpunctata</i>	Water Ladybird															X										
35	Coleoptera - Beetles	<i>Propylea quattuordecimpunctata</i>	14 Spot Ladybird	1						1	1			1								1			1		X	
36	Hemiptera - Bugs	<i>Zicrona caerulea</i>	Blue Shieldbug							1	1			1													X	
37	Hymenoptera - Bees/Wasps/Sawflies	<i>Anthophora plumipes</i>	Hairy-footed Flower-bee																		X							
38	Hymenoptera - Bees/Wasps/Sawflies	<i>Bombus lapidarius</i>	Red-tailed Bumblebee										1	1	1	1						1	1	1			X	
39	Hymenoptera - Bees/Wasps/Sawflies	<i>Vespa crabro</i>	Hornet	1	1																	1			1		X	
40	Hymenoptera - Bees/Wasps/Sawflies	<i>Diplolepis rosae</i>	Bedeguar Gall							1	1	X		1										1				
41	Hymenoptera - Bees/Wasps/Sawflies	<i>Urocerus gigas</i>	Giant Horntail			X																						
42	Hymenoptera - Bees/Wasps/Sawflies	<i>Tenthredo scrophulariae</i>	Figwort Sawfly															X	1									
43	Diptera - Flies	<i>Stratiomys potamida</i>	Banded General							1	1			1									1	1		1		X

		<i>picacea</i>	Inkcap																								
99	Fungi	<i>Phallus impudicus</i>	Stinkhorn	X																							
100	Fungi	<i>Various</i>	Waxcap agg. (excluding Snowy + Blackenin g)											X													
			Indicators	3	7	1	5	3	2	0	1	0	2	5	2	4	4	6	1 4	4	3	2	2	3	2	2	