

# North Yorkshire and York Local Nature Recovery Strategy (LNRS)

Appendix 2: Methodology for the selection of LNRS  
priority and focus species

**CONSULTATION DRAFT**  
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# 1.Introduction

In support of the North Yorkshire & York LNRS (NYY LNRS) process 60 LNRS species and five species assemblages were identified to address Defra guidance to consider the impact of the LNRS on species of importance within the strategy area (101 species in total – see Table 1). These species and the process followed in their selection are identified below.

The taxonomic breakdown is heavily skewed towards vertebrates, which partly reflects monitorability and information likely to be secured in relation to habitat change as much as to the rarity of individual species.

The draft shortlist includes 21 species that are endangered or critically rare, with a further 28 that are presently vulnerable or near threatened.

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Table 1: North Yorkshire and York LNRS Individual Focus Species List

Species	Common Name	Taxon	Conservation Status (RDB)	Associated Habitat
<i>Bufo bufo</i>	Common Toad	Amphibians and reptiles	NT	Grasslands, woodland, hedgerows, farmland, brownfield sites, parks and gardens, ponds, lakes, ditches and canals.
<i>Rana temporaria</i>	Common Frog	Amphibians and reptiles	LC	Grasslands, woodland, hedgerows, farmland, parks and gardens.
<i>Vipera berus</i>	Adder	Amphibians and reptiles	NT	Wetlands, grassland, heathlands, blanket bog, woodland, maritime cliff and slope, moorlands, hedgerows.
<i>Andrena tarsata</i>	Tormentil Mining Bee	Bees, wasps, ants & sawflies	NA	Heathlands, acid grasslands, rush pastures, glades/rides in conifer plantations.
<i>Bombus monticola</i>	Bilberry Bumblebee	Bees, wasps, ants & sawflies	NA	Upland acid grassland and heathland.
<i>Formica lugubris</i>	Northern Hairy Wood Ant	Bees, wasps, ants & sawflies	NA	Coniferous and mixed woodland
<i>Apus apus [br]</i>	Swift	Birds	LC	Urban areas, grassland, farmland, hedgerows, wetland, rivers, lakes, open woodland
<i>Asio flammeus [br]</i>	Short-eared Owl	Birds	EN	Upland heathland, upland grassland
<i>Circus cyaneus [br]</i>	Hen Harrier	Birds	EN	Lowland heathland, upland heathland, upland grasslands
<i>Coccothraustes coccothraustes [br]</i>	Hawfinch	Birds	EN	Broadleaved woodland; wood pasture and parkland
<i>Dryobates minor [br]</i>	Lesser Spotted Woodpecker	Birds	EN	Broadleaved woodland; parkland; hedgerows with trees
<i>Falco columbarius [br]</i>	Merlin	Birds	EN	Upland heathland
<i>Lyrurus tetrix [br]</i>	Black Grouse	Birds	VU	Moorland fringe with scrub and rough pasture
<i>Motacilla flava [br]</i>	Yellow Wagtail	Birds	NT	Wet grassland, wetlands, hay meadows, arable field margins, arable land
<i>Numenius arquata [br]</i>	Curlew	Birds	EN	Upland grassland, upland heathland, blanket bog, rush pasture, lowland grassland
<i>Passer montanus [br]</i>	Tree Sparrow	Birds	VU	Broadleaved woodland, wood pasture and parkland, hedgerows, grasslands, arable field margins
<i>Perdix perdix [br]</i>	Grey Partridge	Birds	VU	Grassland, arable land
<i>Poecile montanus [br]</i>	Willow Tit	Birds	EN	Wet woodland, riparian woodland and scrubby areas
<i>Poecile palustris [br]</i>	Marsh Tit	Birds	NT	Broadleaved woodland, wet woodland and scrub, farmland with woody areas.

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Species	Common Name	Taxon	Conservation Status (RDB)	Associated Habitat
<i>Streptopelia turtur</i> [br]	Turtle dove	Birds	CR	Open woodland; tall, thick hedgerows in farmland, parkland, arable land
<i>Tringa totanus</i> [br]	Redshank	Birds	VU	Upland heathland, upland grassland, wet grassland, freshwater marsh
<i>Turdus torquatus</i> [br]	Ring Ouzel	Birds	NT	Upland heathland with scrub, upland calcareous grassland
<i>Vanellus vanellus</i>	Lapwing	Birds	VU	Grassland, upland hay meadows, arable land, wetlands, floodplain grazing marsh
<i>Aricia artaxerxes</i>	Northern Brown Argus	Butterflies	VU	Upland and lowland calcareous grassland with scrub
<i>Austropotamobius pallipes</i>	White-clawed Crayfish	Crayfish	NA	Rivers, ponds
<i>Cordulegaster boltonii</i>	Golden-ringed Dragonfly	Dragonflies and damselflies	LC	Rivers and streams
<i>Lestes sponsa</i>	Emerald Damselfly	Dragonflies and damselflies	LC	Wetlands
<i>Carabus monilis</i>	Necklace Ground Beetle	Ground beetles	EN	Open habitat including arable margins, sandy heathland, woodland, thick scrub, hay meadows.
<i>Chrysolina graminis</i>	Tansy Beetle	Leaf beetles and allies	EN	Tall sward on riverbanks
<i>Anoplodera sexguttata</i>	Six-spotted Longhorn	Longhorn beetles	NT	decaying wood in open broadleaved woodland
<i>Arvicola amphibius</i>	European Water Vole	Mammals	EN	Rivers, wetlands, ditches, mixed woodland
<i>Erinaceus europaeus</i>	West European Hedgehog	Mammals	VU	Urban spaces and gardens, grassland, mixed woodland, heathland, arable land
<i>Micromys minutus</i>	Harvest Mouse	Mammals	NT	Tussocky grasslands, hedgerows, field margins, road verges, reedbeds, ditches
<i>Neomys fodiens</i>	Water Shrew	Mammals	LC	Banks of streams, rivers, ponds, ditches, mixed woodland,
<i>Sciurus vulgaris</i>	Red Squirrel	Mammals	EN	Upland & moorland, coniferous woodland; broadleaved woodland
<i>Baetis niger</i>	Southern Iron Blue	Mayflies	LC	Rivers and streams
<i>Mytilus edulis</i>	Blue Mussel	Molluscs	NA	Rocky shores
<i>Margaritifera margaritifera</i>	Freshwater Pearl Mussel	Molluscs (non-marine)	CR	Rivers and streams
<i>Pseudanodonta complanata</i>	Depressed River Mussel	Molluscs (non-marine)	NA	Rivers and streams, large ditches and canals
<i>Vertigo geyeri</i>	Geyer's Whorl Snail	Molluscs (non-marine)	NT	Open flushes in calcareous fens and mires
<i>Arctia caja</i>	Garden Tiger	Moths	NA	Gardens, damp meadows, fens, riverbanks, open woodland

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Species	Common Name	Taxon	Conservation Status (RDB)	Associated Habitat
<i>Chiasmia clathrata</i>	Latticed Heath	Moths	NA	Gardens, calcareous grassland, fens, open woodland, heathland and moorland
<i>Euclidia glyphica</i>	Burnet Companion	Moths	NA	Dry or damp grasslands (usually calcareous), flower-rich hay meadows, woodland rides, verges
<i>Eupithecia pygmaea</i>	Marsh Pug	Moths	NA	Wet meadows, marshes, fens
<i>Panemeria tenebrata</i>	Small Yellow Underwing	Moths	NA	Flower-rich grasslands, sea-cliffs, roadside verges
<i>Perizoma minorata</i>	Heath Rivulet	Moths	NA	Moorland, upland pasture and limestone grassland
<i>Coeloglossum viride</i>	Frog Orchid	Vascular plants	VU	lowland calcareous grassland, limestone pavement
<i>Drosera rotundifolia</i>	Round-leaved Sundew	Vascular plants	LC	blanket bog, lowland raised bog, upland heathland, upland flushes, fens and swamps
<i>Filipendula vulgaris</i>	Dropwort	Vascular plants	LC	Calcareous grassland, limestone pavement, upland heathland
<i>Genista anglica</i>	Petty Whin	Vascular plants	NT	Upland heathland, upland hay meadows, bog, fen, marsh and swamp
<i>Gentianella campestris</i>	Field Gentian	Vascular plants	VU	Upland calcareous grassland, lowland dry acid grassland, lowland meadow
<i>Juniperus communis</i>	Juniper	Vascular plants	LC	Upland heathland, upland broadleaved woodland, calcareous grassland, limestone pavement
<i>Neotinea ustulata</i>	Burnt Orchid	Vascular plants	EN	Lowland calcareous grassland
<i>Ophioglossum vulgatum</i>	Adder's-tongue fern	Vascular plants	LC	Broadleaved woodland, lowland meadows, unimproved grassland, heathland
<i>Orobanche reticulata</i>	Thistle Broomrape	Vascular plants	NT	Lowland calcareous grassland
<i>Primula farinosa</i>	Bird's-eye Primrose	Vascular plants	VU	Upland calcareous grassland
<i>Succisa pratensis</i>	Devil's-bit Scabious	Vascular plants	LC	acid grassland, calcareous grassland, calcareous grassland, lowland meadows, heathland, rush pastures, broadleaved and mixed woodland
<i>Trifolium fragiferum</i>	Strawberry Clover	Vascular plants	LC	Coastal saltmarsh, lowland fen, calcareous grassland, gardens
<i>Sium latifolium</i>	Greater Water-parsnip	Vascular plants	EN	Rivers, lowland fens, upland flushes, fens and swamps, standing open water and canals, reedbeds
<i>Viola canina</i>	Heath Dog-violet	Vascular plants	NT	Lowland dry acid grassland, heathland, rivers and streams

Table 2: North Yorkshire and York LNRS Focus Species Assemblages List

Species	Common Name	Taxon	Conservation Status (RDB)	Associated Habitat
<b>Bats Species Assemblage</b>				woodland, woodland edge, hedgerows, grassland, wetlands, lakes, rivers, gardens, parkland, buildings and bridges (roosting), tree holes (roosting)
<i>Myotis brandtii</i>	Brandt's Bat	Mammals	NA	
<i>Myotis daubentonii</i>	Daubenton's Bat	Mammals	LC	
<i>Myotis mystacinus</i>	Whiskered Bat	Mammals	NA	
<i>Myotis nattereri</i>	Natterer's Bat	Mammals	LC	
<i>Nyctalus leisleri</i>	Leisler's Bat	Mammals	NT	
<i>Nyctalus noctula</i>	Noctule Bat	Mammals	LC	
<i>Pipistrellus pipistrellus</i>	Common Pipistrelle	Mammals	LC	
<i>Pipistrellus pygmaeus</i>	Soprano Pipistrelle	Mammals	LC	
<i>Plecotus auritus</i>	Brown Long-eared Bat	Mammals	LC	
<i>Myotis alcathoe</i>	Alcathoe Bat	Mammals		
<b>Sea Bird Assemblage</b>				Coastal cliffs and rocks, urban areas
<i>Rissa tridactyla [br]</i>	Kittiwake	Birds	CR	
<i>Fulmarus glacialis [br]</i>	Fulmar	Birds	LC	
<i>Larus argentatus [br]</i>	Herring Gull	Birds	EN	
<b>Arable Flowers Assemblage</b>				Arable Field Margins, parks and gardens
<i>Centaurea cyanus</i>	Cornflower	Vascular plants	NA	
<i>Cerastium arvense</i>	Field Mouse-ear	Vascular plants	LC	
<i>Cichorium intybus</i>	Chicory	Vascular plants	NA	
<i>Clinopodium acinos</i>	Basil Thyme	Vascular plants	VU	
<i>Euphorbia exigua</i>	Dwarf Spurge	Vascular plants	NA	
<i>Filago lutescens</i>	Red-tipped Cudweed	Vascular plants	EN	
<i>Filago vulgaris</i>	Common Cudweed	Vascular plants	NT	
<i>Fumaria purpurea</i>	Purple Ramping-fumitory	Vascular plants	LC	

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Species	Common Name	Taxon	Conservation Status (RDB)	Associated Habitat
<i>Galeopsis speciosa</i>	Large-flowered Hemp-nettle	Vascular plants	NA	
<i>Glebionis segetum</i>	Corn Marigold	Vascular plants	NA	
<i>Geranium columbinum</i>	Long-stalked Crane's-bill	Vascular plants	LC	
<i>Hypochaeris glabra</i>	Smooth Cat's-ear	Vascular plants	VU	
<i>Mentha arvensis</i>	Corn Mint	Vascular plants	LC	
<i>Minuartia hybrida</i>	Fine-leaved Sandwort	Vascular plants	EN	
<i>Onobrychis viciifolia</i>	Sainfoin	Vascular plants	NT	
<i>Scandix pecten-veneris</i>	Shepherd's-needle	Vascular plants	NA	
<i>Spergula arvensis</i>	Corn Spurrey	Vascular plants	VU	
<i>Stachys arvensis</i>	Field Woundwort	Vascular plants	NA	
<i>Viola tricolor</i>	Wild Pansy	Vascular plants	NT	
<b>Waxcap fungi Assemblage</b>				Grasslands, verges, churchyards, woodland
<i>Gliophorus psittacinus</i>	Parrot Waxcap	Fungi	NA	
<i>Hygrocybe punicea</i>	Crimson Waxcap	Fungi	NA	
<i>Porpolomopsis calyptriformis</i>	Pink Waxcap	Fungi	NA	
<b>Freshwater Fish Assemblage</b>				Rivers and Streams
<i>Anguilla anguilla</i>	European Eel	Freshwater Fish	CR	
<i>Lampetra fluviatilis</i>	European River Lamprey	Freshwater Fish	LC	
<i>Lampetra planeri</i>	Brook Lamprey	Freshwater Fish	LC	
<i>Petromyzon marinus</i>	Sea Lamprey	Freshwater Fish	LC	
<i>Salmo salar</i>	Atlantic Salmon	Freshwater Fish	EN	
<i>Salmo trutta</i>	Sea/Brown Trout	Freshwater Fish	NA	
<i>Cottus gobio</i>	Bullhead	Freshwater Fish	LC	



### **Red Data Book Conservation Status Categories**

LC - Least concern

NT - Near Threatened

VU - Vulnerable

EN - Endangered

CR - Critically Rare

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## 2. North Yorkshire and York LNRS Priority Species Assessment Process

The following briefly describes the preliminary data handling and consultation process undertaken by the North and East Yorkshire Ecological Data Centre (NEYEDC) to generate the longlist of species for consideration for inclusion in the North Yorkshire and York Local Nature Recovery Strategy (NYY LNRS).

The Defra *Species Recovery within Local Nature Recovery Strategies: Advice for Responsible Authorities* document outlined that species included on the long list should be “at high risk of extinction in England that are present in the strategy area; species which are not currently present but could feasibly become established in the strategy area; and other species of local significance.” Their criteria for inclusion were split into Critical and Important considerations and were heavily based on the IUCN Red List. The process summarised here was developed based on these criteria and incorporates data from as many sources as was feasible to include.

## 3. Longlisting process

Defra provided a draft list of 8259 species for consideration from their "Draft Priority Species Threatened and Near Threatened List". This formed the base dataset for generating a longlist from which to select species considered to be most relevant to the North Yorkshire and York LNRS. At this stage, other JNCC classified Section 41 species were added to the base list, but these were excluded following subsequent guidance.

## 4. Species list consolidation

There was considerable additional input from a variety of sources, including both local and national expertise. The additional species lists were cross-referenced with the base Defra list, and any species not present were added to form a Consolidated Longlist. A species' presence on any of the additional datasets was noted during this process, helping to provide further supporting information for future decision-making during the shortlisting process.

The following datasets were cross-referenced with each other and then combined with the Defra base list in stated order:

1. The Yorkshire Wildlife Trust (YWT) provided their lists of Yorkshire Species of Conservation Concern for three taxa: birds, macro-moths, and vascular plants, including an index indicating the level of concern for each species. Any species at or above the threshold for concern (all birds scoring 1 or above, macro-moths scored 3 or above, and vascular plants scored 5 or above) were cross-referenced with the preparatory Defra list. The potential monitorability of species included on the YWT lists was high, and they were judged worthy of consideration from both species recovery and practicality perspectives. The concern index calculated by the YWT was recorded in the longlist (Appendix 5 – Priority Species List, Column “YWT YSC Score”).
2. The Yorkshire Marine Nature Partnership (YMNP) ran a discussion workshop on coastal and marine species to include. Attendees assigned scores to species to generate a shortlist, which were incorporated into the longlist here (Appendix 5, “YMNP Score”). Although Defra later advised that the marine environment be excluded from Local Nature Recovery Strategies, the information was valuable in relation to those species which live partly on land or exist in the inter-tidal zone.
3. The Forestry Commission generated a list of LNRS Priority Species associated with woodland, trees and scrub habitat. This was based on the original Defra species list but whilst it added no species, inclusion on the FC list indicated support for a species going into further stages (denoted Y in the “FC List” column in Appendix 5).
4. Local experts were invited to a “LNRS Species and Habitats Workshop”, prior to which the Defra list (filtered for Red List status) was circulated. Here local experts were asked to identify species they felt match the criteria and should be considered for inclusion in the LNRS. Species listed during the workshops were either added to the list (if new) or highlighted as of interest during the workshop (indicated by a “Yes” in the “NYY Workshop” column).

The list was broken down by taxon and circulated to local experts. They were consulted on whether, in their opinion, a species should be included for LNRS consideration based on its current distribution or, if not, whether any potential for range extension would be sufficient for consideration.

Experts were also asked to add any species of local importance they considered merited inclusion based on current or potential distribution.

Given the length of the various lists (particularly for certain taxa), experts were provided only with Red List Threatened species at this stage, with Near Threatened species excluded. Species identified for inclusion at this stage were recorded.

The resulting responses were merged with the Defra list to form a 'Consolidated Longlist', increasing the list to 8702 unique species. This list was taken on to the data filtering process in accordance with the guidance in 2024 (Figure 1).

### Species Prioritisation Process

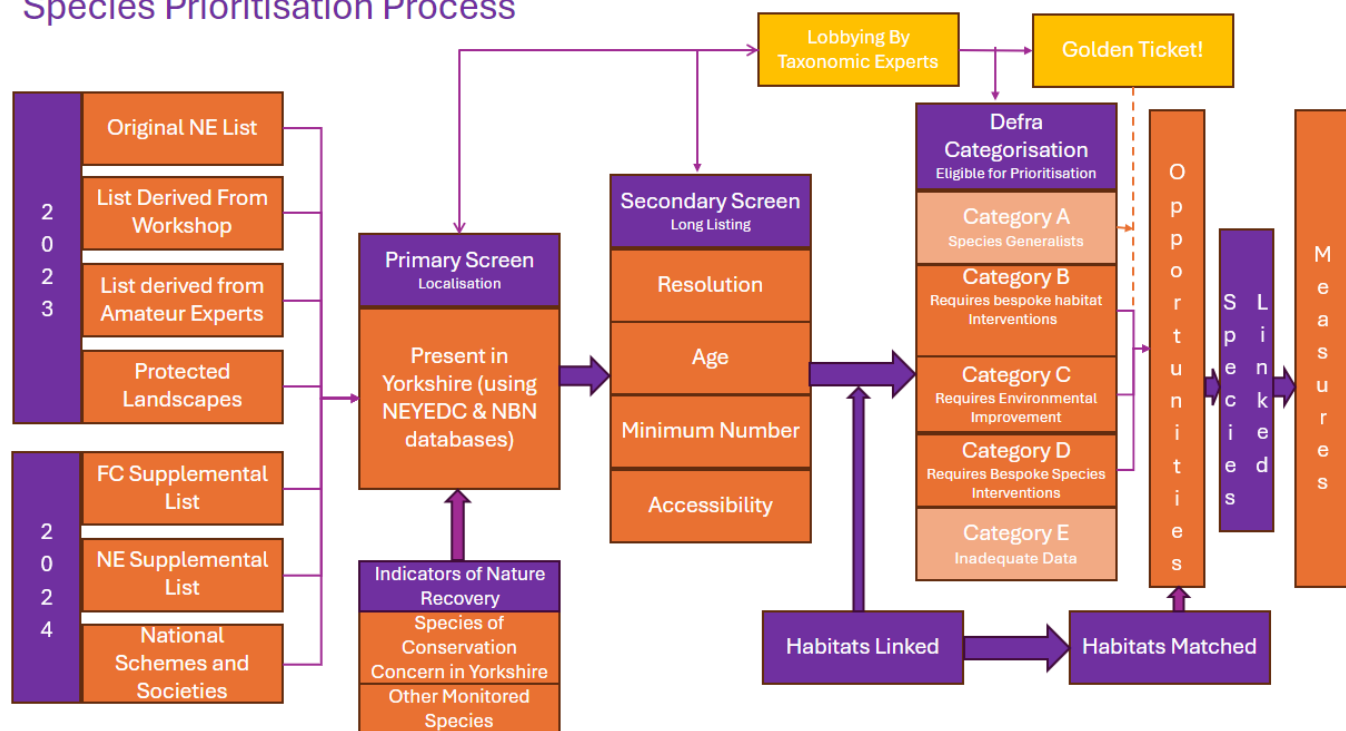


Figure 1: Steps towards the adoption of NYY LNRS species

## 5. Filtering the Consolidated Longlist

In accordance with statutory guidance, this list was filtered to remove any species not falling into an IUCN Red List Threatened or Near Threatened category and species of “Least Concern” were removed. This was undertaken after the above consolidation process to maximise the data consistency and, in line with statutory and other guidance, any species put forward in the additional datasets was retained (irrespective of Red List status). This filtered version of the list comprised 2416 unique species (2481 where breeding and non-breeding bird populations were considered separately).

For LNRS inclusion, a species should be supported by record data of sufficient quantity and quality. Accordingly, the Consolidated Longlist was filtered to remove species not recorded as present in the North Yorkshire and York strategy area, or with too few, too old, or too geographically coarse records.

## 6. Database screening

To determine the presence of a species in the strategy area and the nature of any record sets, the Consolidated Longlist was screened against two sources of species records: the National Biodiversity Network database, and NEYEDC’s own holdings.

The resulting records were evaluated based on:

- Total number of records in strategy area
- The year of the most recent records
- The geographic precision of the records
- For NBN data, the type(s) of license associated with the records (as records for non-commercial use only cannot be used here).

The following criteria were applied to each species in both the NBN and NEYEDC record sets (except those supported for potential expansion into the strategy area by local experts):

- A minimum of 20 records
- Records exist from within the last 20 years
- Records exist with a minimum of 1km<sup>2</sup> geographic precision
- For NBN data, species with only CC-BY-NC licenses were removed.

As might be anticipated differences in level of recording across taxon groups resulted in a significant skew in the species composition of the reduced list. Macromoths, Hymenoptera, and Fungi were notably underrepresented. Very few hymenopteran species were suggested but the YWT provided a list of macro-moths, of which a significant number were retained on the reduced list. Although local experts suggested a number of CHEGD and other fungi, all these were filtered out given insufficient records. Species lists for each of these taxa were also provided by Natural England but arrived too late for consideration.

In preparation of a shortlist, suggested by the national guidance to be 40-70 species, any associated habitat(s) and an LNRS species category (A-G) were assigned to each species in the longlist (see Table 3 for category explanations). This information was largely added based on data sources (see below) or consultation.

This filtering and initial evaluation resulted in 735 species in Categories A-D and F (801 with breeding/non-breeding birds), with a further 1683 species in Category E (insufficient data). A small working group assessed the long list and highlighted 169 species that were felt to be too common in the LNRS area to warrant inclusion in the longlist and were removed.

## 7. Evaluation Process

The following actions were undertaken for all species on the longlist. Candidate species that were filtered out based on data availability during the longlisting process were retained in a separate section and placed in LNRS Category E.

1. Every species in Category 1 in the Yorkshire Dales National Park Nature Recovery Plan Species List (“where bespoke conservation action above and beyond habitat / site management is required”) was placed into LNRS Category D.
2. Any birds listed as having drivers of decline outside England in the Natural England guidance were assigned LNRS Category F (NOTE: This only included Red List Threatened species).
3. Categories and other useful information (such as expert comments) were cross-referenced from the output of the 2023 LNRS Species and Habitats workshops.
4. Natural England generated a priority list where Yorkshire & North Lincolnshire has a national responsibility. These were factored into shortlisting criteria (Appendix 5 Notes Column).
5. Habitat and LNRS Category data were added where possible from the sources listed in “Data Sources” below and other expertise.
6. Feedback and comments obtained during various stages of consultation were added to species where applicable.

This final evaluated longlist product is referred to as the LNRS Priority Species list and can be viewed in Appendix 5. It contains 635 species (including breeding/non-breeding birds). A further 1683 species are in the list under Category E, where there is insufficient data to determine their status.

## 8.NYY LNRS Species Shortlisting Process

The Priority Species List was reviewed and considered in the light of the NYY LNRS priorities and with the goal of providing a list of species that would:

- benefit directly (as well as indirectly) from proposed measures over the period of the first iteration of the LNRS.
- enable changes to be tracked via general recording efforts or targeted monitoring effort.
- provide a means of encouraging more people to get involved with monitoring activities and to develop their skills.
- be likely to help raise awareness and encourage greater involvement with and support for the LNRS.

First, each longlisted species was linked to LNRS measures where possible, to help determine how they would be affected by LNRS delivery. These are noted in Appendix 5's "Associated Measures Code" column.

The longlist was then filtered based on a series of categories, notably:

- presence on the YWT Yorkshire Species of Conservation Concern list for North Yorkshire and York.
- presence in any of the five protected landscapes Nature Recovery Plans in the LNRS area.
- presence on the Yorkshire Marine Nature Partnership workshop species list.
- presence on the Forestry Commission and Natural England Priorities list.
- Highlighted in the LNRS Species and Habitats workshop.
- presence in an LNRS measure.
- Highlighted as an important species by local expert during the longlisting process.
- To address urgency of need by species, additional weighting was provided by having a score associated with Red Data Book Conservation Status, with greater weighting given to higher conservation status.

This generated a filtered list of 377 species.

Inclusion in any above category (other than the final one) scored a single point, and the assigned points for each species were totalled to weight the local importance of any species. Any species scoring over 4 was automatically proposed to be shortlisted, to be considered against the four goals outlined at the beginning of this section.

In addition, whilst reviewing the longlist, any species that stood out as a potential indicator species to demonstrate the success of LNRS measures was included for consideration. This focussed on identifying species linked to habitats that were not well represented by the previous shortlisting stage e.g. no shortlisted species were linked to saltmarsh.

The outputs of this process are listed in Table 1. The methodology above resulted in 60 shortlisted species, with a further 41 species categorised into 5 species assemblages, 101 species in total. These are referred to in this LNRS as “focus species”.

## 9. Reviewing draft species list against LNRS habitats

After the initial shortlisting, the species were matched to LNRS priorities to determine if the shortlisted species suitably represent the range of habitats present in the measures of the LNRS. This was the case for all priorities except neutral grassland priorities and saltmarsh, so three additional focus species were added to account for this.

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## 10. Additional Notes

The LNRS Species Guidance allows the inclusion of grouping candidate species into species assemblages, where species share the same habitat requirements and would benefit from the same recovery measures. Five species assemblages were chosen, where species of the same taxa were benefitting from the same range LNRS measures. Other commonly used species assemblages such as farmland birds and wading birds were not chosen because potential species within these assemblages varied in the LNRS measures associated with them.

Where species are known to have a very limited geographical range, these in the main were excluded from being a focus species. A few species with limited ranges have been included as potential shortlisted species where they are listed in LNRS measures e.g. red squirrel.

Species in categories A-D were the only ones considered in the shortlisting process. The only exception to this is Freshwater Pearl Mussel and Tormantil Mining Bee, which are Category E (insufficient data). These were due to data licencing issues and species should be recategorized once these are resolved.

*Table 3 - LNRS Species Categories (from non-statutory advice)*

Category	Description	Benefit from LNRS?	Suitable LNRS species priorities?
A: Needs more / bigger / better-connected habitat	<ul style="list-style-type: none"> <li>- Species likely to markedly benefit from general creation, expansion, and improved connectivity of good quality habitats in the strategy area</li> <li>- Species with high recovery potential that do not require specific or targeted recovery measures</li> </ul>	Yes	Probably not – species are likely to benefit from LNRS measures generally and do not need to be singled out for specific LNRS measures
B: Needs targeted habitat management	<ul style="list-style-type: none"> <li>- Species with specific requirements for habitat quality, structure, conditions, or processes above and beyond category A</li> <li>- Species may require specific configurations or complexes of connected or nearby habitat/s, either at site level or across large areas / multiple sites. This may include habitat connectivity measures for species needing support to track climate change.</li> <li>- Causes of decline can be addressed with new or improved management practices</li> </ul>	Yes	Yes

Category	Description	Benefit from LNRS?	Suitable LNRS species priorities?
C: Needs improvements in environmental quality	<ul style="list-style-type: none"> <li>- Species primarily limited by one or more pressures beyond site level that can be mitigated at LNRS scale or wider scales through collaboration with neighbouring RAs</li> <li>- For example, better catchment water quality, improved spatial planning of air pollution sources, mitigation of recreational disturbance</li> </ul>	Yes	Yes
D: Needs bespoke conservation action/s	<ul style="list-style-type: none"> <li>- Species requiring additional, tailored measures <i>which can be spatially indicated</i> on the local habitat map</li> <li>- Species may need multiple coordinated actions to bring about recovery, including combinations of local actions and national actions, where LNRS could address the former</li> <li>- Examples of bespoke, spatially targetable local actions include conservation translocations (such as assisted colonisation for climate change adaptation), control of invasive species, and localised surveys</li> </ul> <p><b>NB.</b> Species requiring bespoke measures <i>which cannot be mapped</i> should be assigned to category E)</p>	Yes	Yes
E: Needs better evidence base / on-the-ground action is not a priority	<ul style="list-style-type: none"> <li>- Species for which there is insufficient evidence or understanding regarding drivers of decline, required recovery actions, and range / population levels</li> <li>- Species for which the current priority is other than on-the-ground action, for example research or ex-situ conservation</li> </ul>	Unknown	No
F: Needs action outside England	<ul style="list-style-type: none"> <li>- Species with low (or very low) recovery potential due to factors constraining recovery beyond English borders</li> <li>- Evidence shows that action in England is highly unlikely to improve species' prospects</li> <li>- This category is likely to apply only to migratory species (e.g., Afro-Palearctic migratory birds affected by hunting)</li> </ul>	No	No
G: Vagrants / occasional visitors	<ul style="list-style-type: none"> <li>- Species currently outside their normal breeding or wintering range or normal migration route, without an extant population in the strategy area, and which are not suitable for conservation translocation</li> </ul>	No	No

## 11. Data sources

Published sources of data used to assign habitat(s) and/or LNRS categories:

- Natural England’s guidance on Category F birds  
“LNRS species guidance - threatened bird declines driven by factors operating outside England”
- Yorkshire Dales NP Priority Species List, which categorises species based on the type of intervention they may need (i.e. anything in their Cat 1 ‘bespoke action needed’ relates directly to LNRS Cat D) “2023 YDNP Priority Species List”
- Herptiles guidance from ARC, includes habitat and assemblage information  
“howtodesignlnrnsforamphibiansandreptilesdraftv1.1”
- Mammal data from the PTES LNRS guidance  
“PTES-Local-Nature-Recovery-Strategies”
- Pantheon for habitat data and assemblages for invertebrate species  
[Home | Pantheon \(brc.ac.uk\)](https://brc.ac.uk/)
- Habitats: Bat Conservation Trust LNRS guidance  
“BCT-LNRS-Guidance-for-Responsible-Authorities-V2\_10April2024” and links therein