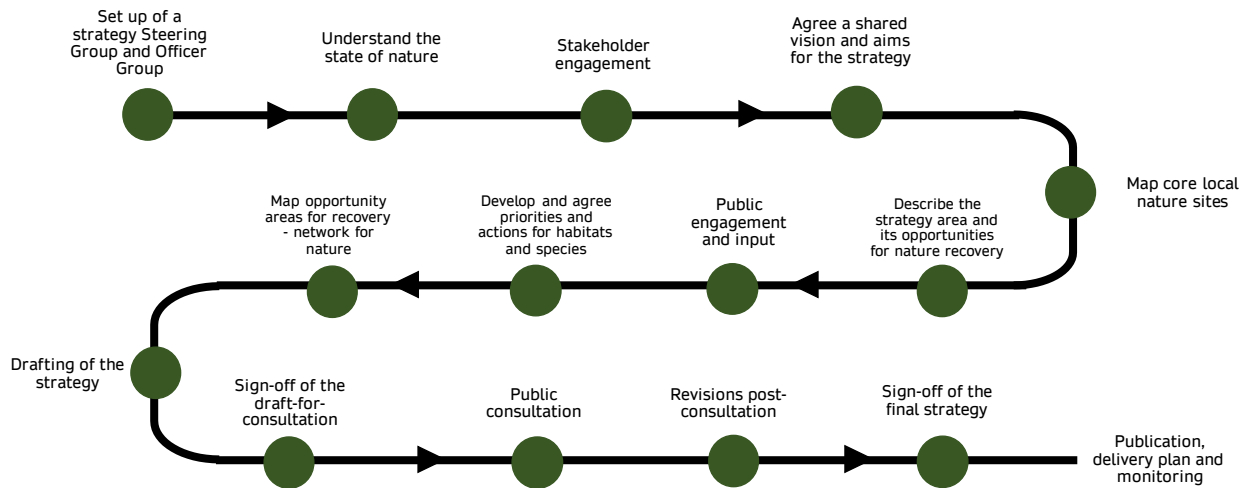


Appendix 2. Evidence and processes used in preparing the GM LNRS

Greater Manchester Combined Authority (GMCA) has led the preparation of this strategy, through a stepped process, supported by the Greater Manchester Ecology Unit, Natural England, the 10 Local Authorities and the Peak District National Park. The overarching processes is broadly illustrated in the diagram below. In this appendix we provided further details and information about key parts of this process, including the development of priorities and actions for the strategy and the mapping of opportunity areas.



Appendix 2a. Process and evidence used to develop priorities and actions (measures) for the GM LNRS

Developing priorities

As per the Environment Act, each Local Nature Recovery Strategy must include:

- A Statement of Biodiversity Priorities, including: a description of the strategy area and its biodiversity
- Opportunities for recovering or enhancing biodiversity in the strategy area
- Priorities for biodiversity recovery or enhancement, considering contributions to other environmental benefits
- Proposals for potential measures (actions) related to those priorities

Following the Environment Act, we set out priorities and measures (actions) within the strategy, building on the description of the strategy area, state of nature and opportunities for nature recovery. The priorities set out in the strategy are the end results or outcomes that we all need to work towards and the actions are the measures we all need to undertake to try to achieve them.

Approach to identifying habitat priorities

The identification of priorities for nature recovery have built upon:

- the description of the habitats, species and state of nature in Greater Manchester (see Section 3 of the GM LNRS and also appendix 5)
- the major opportunities for nature recovery identified for each habitat type in Greater Manchester, established via our habitat workshops (see appendix 3 for further details).

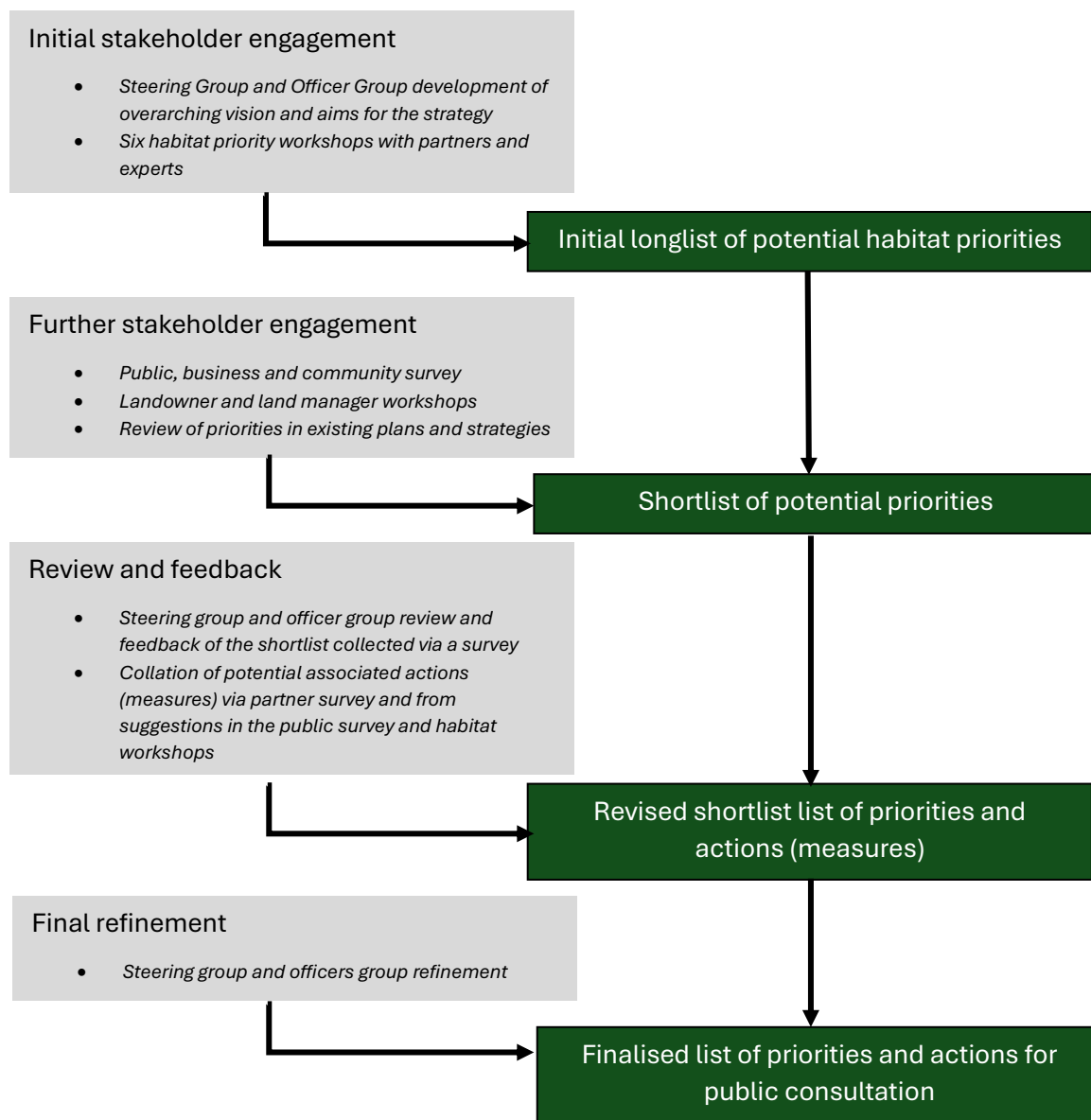
This document provides an overview of the main processes followed in establishing the priorities building on these.

Outline of key inputs and process involved to develop the habitat priorities and actions

We followed the statutory guidance to develop our habitat priorities and actions (measures). The main inputs used to inform these included:

Stakeholder input <i>From multiple workshops with habitat experts, workshops with landowners/managers and responses to an open public survey</i>	Steering group and Officer group input <i>Feedback and sessions with the GM LNRS steering group and officer group</i>	Priorities in existing plans and strategies <i>Including all those listed in appendix 2e</i>	State of nature review and description of the main habitats in the strategy area
--	---	--	---

These inputs informed, and were used throughout, a stepped process to develop the habitat priorities and actions (measures), the key steps of which are expanded on further in the subsequent section.



Key steps in the development of habitat priorities and actions (measures)

Initial longlist of potential habitat priorities and measures

The initial longlist of potential habitat priorities was informed and developed using a wide range of evidence and views, including the following main inputs

- Co-development of the overarching vision and aims for the GM LNRS with the GM LNRS steering group and officer group
- Engagement with key experts and stakeholders via six habitat priority workshops on broad habitat types relevant to the strategy area
- GM State of Nature Report and overview of the main pressures on nature

- GM LNRS pilot priorities

Shortlist of potential priorities and measures

The initial longlist of potential habitat priorities was then condensed to reduce any repetition and to ensure the priorities identified met the broad requirements of the statutory regulations and guidance.

The initial longlist was also reviewed against priorities in existing plans, policies and strategies to identify and resolve any gaps and missing priorities.

Further stakeholder engagement was also undertaken and feed into the refinement and shortlisting of priorities and develop measures (actions), including:

- A public survey, with over 800 responses from members of the public, community groups, landowners, environmental charities and local businesses
- Dedicated workshops with landowners and farmers
- Dedicated events and workshops for sectors such as health care and business

Revised shortlist list of priorities and actions (measures)

The shortlist of potential priorities was then reshared with the LNRS steering group and officer group via a partner feedback survey, requesting comments and feedback on each of the priorities and providing an opportunity to input further suggested actions. Feedback received through this process was then used to revise the priorities and actions further. Engagement events were used to test some of the draft priorities and actions further.

Finalised list of priorities and measures for public consultation

The priorities and m actions were subsequently reissued to the LNRS steering group and officer group after revisions had been made, with a further opportunity for final comments to be made. After this final review period the draft priorities and actions for the strategy were finalised for the draft-for-consultation.

Public consultation

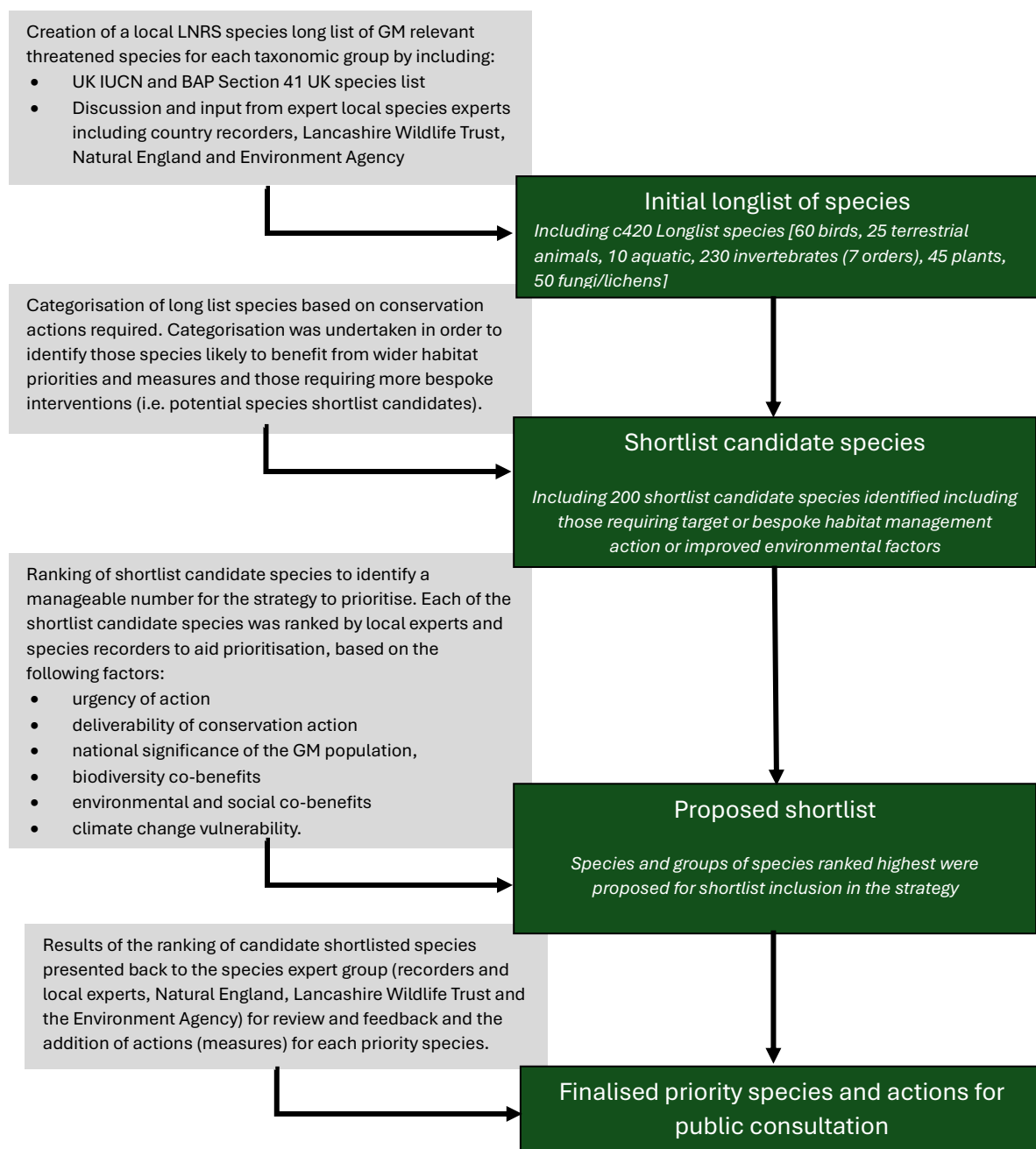
We intend to use the public consultation as an opportunity for further meaningful engagement with a range of stakeholder on the priorities and actions in the strategy and prioritisation within these. Once this has been completed an updated list of priorities will be produced to reflect the feedback received.

Appendix 2b. Outline of key inputs and process involved in developing the species priorities and actions (measures)

The species priorities were developed in parallel to the habitat priorities.

The habitat priorities and measures will be of benefit to many species. Therefore, the species priorities were developed specifically in order to identify species, and groups of species, which are particularly at risk locally and need bespoke action beyond the wider habitat priorities set out in the strategy. The selection process was guided by the national process set out by Natural England in national non-statutory guidance for LNRs¹ and through working with a group of local species experts.

This process involved:



Appendix 2c. Processes and key steps in mapping opportunity areas for the GM LNRS

The Environment Act requires that all LNRS must identify

- Area of particular importance for biodiversity, GMCA has referred to these as our “**core local nature sites**” within the text of the strategy
- Areas that could become of particular importance for biodiversity, or where the recovery or enhancement of biodiversity could make a particular contribution to other environmental benefits. They are where the responsible authority and local partners propose that effort should be concentrated to restore habitat, to achieve the most for biodiversity and the wider environment. GMCA has referred to these as “**opportunity areas**” throughout the strategy

Methodology for identifying and mapping core local nature sites (areas of particular importance for biodiversity)

GMCA followed the definition provided by DEFRA in the statutory regulations and guidance, and further guidance provided by Defra, to identify and map areas as core local nature sites:

- Nationally designated sites for their value to nature (including Sites of Special Scientific Interest (SSSIs); Special Protected Areas (SPAs), Special Areas of Conservation (SACs), National Nature Reserves (NNRs)),
- Local Nature Reserves (LNRs), locally designated Sites of Biological Importance (SBIs) and Local Wildlife Sites (LWSs)
- Irreplaceable habitats present in GM, as set out in the [Biodiversity Gain Requirements \(Irreplaceable Habitat\) Regulations 2024](#), using the Priority Habitat Inventory. The habitats that meet the Biodiversity Gain Requirements definition, and are present in GM, including: blanket bog, lowland fens, ancient and veteran trees.

Methodology for identifying and mapping opportunity areas (areas that could become of particular importance) for the GM LNRS

To identify opportunity areas for nature recovery, GMCA followed the steps set out below. This stepped process was informed by the statutory regulations and guidance, along with the availability of local data, resources, tools and expertise. The methodology adopted looked to meet the broad vision for the GM LNRS, as agreed with our steering group and officer group, to ‘**deliver a resilient network for nature across the city-region, connecting and enhancing wild spaces so that people and nature can thrive**’. The methodology set out below was presented to our steering group and officer group for comment prior to commencement.

1. Identification and mapping of core local nature sites

As the statutory guidance highlights that opportunity areas should be targeted to join up or expand core local nature sites, the identification and mapping of core local nature sites for Greater Manchester formed a key first step for the subsequent development of our opportunity areas. Focusing opportunity areas around and between core local nature sites aims to help establish larger, more resilient networks of high-quality habitat across the landscape

2. Creation of a land cover and land use map for GM

Our mapping is predominantly habitat driven, rather than species driven. By safeguarding habitat and working towards a nature network this will benefit many species across Greater Manchester, rather than focusing on the specific needs of the conservation of a single species.

To identify the best places to develop resilient networks between our core local nature sites, a key early step was the development of a comprehensive land use and land cover map for GM. There are no comprehensive UK Habs or Phase 1 habitat surveys covering the whole of GM and therefore the creation of a bespoke land cover land use map was undertaken by bringing together a variety of national and local datasets, in order of confidence,

3. Modelling an ecological network and expansion areas

The LNRS statutory guidance has a strong focus on identifying opportunity areas which will help build ecological connectivity, including identifying areas (i) targeted to join up or expand existing core local nature sites, as this can help to establish larger, more resilient networks of high-quality habitat across the landscape; (ii) areas which would achieve greater connectivity of similar biodiverse habitats across the landscape. The focus on connectivity in the LNRS statutory guidance is also reflected in the overarching vision GM LNRS *'to deliver a resilient network for nature across the city-region, connecting and enhancing wild spaces'*.

To identify areas where there are opportunities to help build better ecological connectivity across GM, by better connecting our core local nature sites, we used an established ecological network modelling tool called Linkage Mapper. The selection of Linkage Mapper was based on a review of a series of different possible modelling tools undertaken for GMCA by Lancashire Wildlife Trust and Cheshire Wildlife Trust.

Linkage Mapper is a least cost path ecological modelling tool that was used to model where there are opportunities to better connect our core local nature sites across the existing landscape. We involved local specialists and experts in the setting the modelling parameters used within Linkage Mapper. We modelled separate networks for woodlands, grasslands and wetlands.

Some habitats are inherently more connected, including our rivers, waterbodies and canals, and our upland areas – network modelling was not required for these habitat types. For wetland areas, further processes were also undertaken alongside the modelling to identify suitable conditions for the creation of wetland habitat, this included the consideration of factors such as underlying peat soils and land within or close to flood zones.

Alongside modelling area where there were opportunities to better connect our core local nature sites, we also modelled expansion zones around our core local nature sites to reflect the importance of expanding these existing areas for nature.

4. Refined with partners and experts

Once a draft modelled network had been produced it was shared and refined with members of the steering group and officer group, who reviewed it and were able to propose key areas

to be added. Areas suggested through the model were also refined where they were unsuitable, such as where construction or land use change was identified as already underway.

5. Mapped actions (measures)

Once the ecological network and expansion areas had been agreed, following guidance from Defra, GMCA then mapped areas where specific actions, or measures, (identified within the strategy see section 6 of the GM LNRS) could potentially take place within the expansion areas and ecological networks. For example, we have mapped areas where effort could be concentrated to enhance existing woodlands and areas where there is potential for woodland creation.

Not all actions identified within the GM LNRS have been mapped. The selection of actions for mapping was based on criteria provided for consideration by Defra in national LNRS non-statutory guidance². A list of those actions selected for mapping is set out in appendix 2d.

The mapping of actions was undertaken at the land parcel scale (based on non statutory guidance provided by Defra³) and informed by a land cover and land use map. Mapped actions have been revised based on the data and information we have available on GM wide land uses and land cover. For example, we have tried to avoid suggesting the creation of new woodland on sports grounds or cemeteries.

Due to the scale of Greater Manchester and the limited time and resources available to the GMCA, it has not been possible to ground truth the mapped actions. When using the mapped action, the habitat principles set out in section 5 of the GM LNRS should still be followed, including the prioritisation of site level investigation and consultation of local experts, communities and following existing best practice. The mapped actions should therefore be considered as a starting point, used in combination with local evidence and site investigations and what this tells us would be most beneficial for nature.

6. Final version for public consultation

The public consultation will be an opportunity for further feedback and discussion of the opportunity areas identified for the GM LNRS.

Appendix 2d. List of mapped actions (measures) in the GM LNRS opportunity areas

This appendix is a list of the actions (measures) mapped as the GM LNRS Opportunity Areas (areas that could become of particular importance for biodiversity). These actions were selected for mapping based on the non-statutory guidance provided by DEFRA to Responsible Authorities².

Grasslands, Croplands and Pasture

Mapped actions for this habitat type include:

- Identify and safeguard remaining notable semi-natural grasslands.
- Enhance and appropriately manage remaining semi-natural grasslands and heath to good condition, including increasing species richness.
- Creation or restoration of species-rich grasslands, particularly where they will expand or act as stepping stones or corridors between existing semi-natural grasslands.
- Enhance and manage improved or semi-improved grasslands to boost species richness.

Lowlands, Wetlands and Mosslands

Mapped actions for this habitat type include:

- Enhance and manage existing and remnant areas of lowland raised bog, fens and other wetland habitats over the long term, to improve diversity.
- Enhance patchworks of semi-natural habitats surrounding our remaining lowland raised bogs, fens and other wetland habitats to improve resilience.
- Reintroduce lost species across a range of mossland and wetland communities.
- Restore degraded wetland sites and areas of restorable deep peat, where they will connect remaining wetland habitats.
- Create more patchworks of wetland habitats and transitional habitats, particularly around remaining and restored lowland raised bog, fens and other wetland habitats.

Rivers, Waterbodies and Canals

Mapped actions for this habitat type include:

- Expansion, creation or restoration of a variety of waterside habitats, including woodlands, wetlands and grasslands, where it will better connect existing habitats along our rivers, supporting species movement.
- Improve mobility for aquatic creatures by removing barriers, daylighting buried or covered waterbodies or installing by-pass structures, where feasible.
- Enhance existing habitats within our waterbodies and adjacent grassland, wetland and woodland habitats to increase species richness.
- Make water channels more natural and complex, re-meander channels and reconnect to floodplains where feasible.
- Restore more natural riverbanks, in appropriate locations, and reduce invasive species.

- Restoration and reconnection of habitats alongside canals, including targeted woodland creation and tree planting alongside canals.
- Softening manmade canal banks using natural materials and native plants.

Upland, Moorland and Heath

Mapped actions for this habitat type include:

- Stabilise, rewet and restore deep bare peat towards active blanket bog, where appropriate
- Encourage more diverse native vegetation and more flower-rich habitats, in appropriate places, on existing upland moorlands.
- Create transitional habitats or corridors to increase linkage between our uplands and lowland habitats, where conditions allow.
- Restore more naturalised wet areas, flushes and ponds.
- Create rough, diverse grasslands around flushes and wetlands, wet in some areas with rushes around flushes and springs.
- Encourage the restoration and regeneration of existing upland woodlands and clough woodlands.

Woodlands, Trees and Scrub

Mapped actions for this habitat type include:

- Safeguard, enhance and celebrate ancient, long-established and designated woodlands, veteran and notable trees.
- Enhance existing woodlands, scrub, and hedgerows and diversify, where appropriate, to increase resilience to pests, disease and climate change.
- Target native woodland, hedgerow, and scrub creation, in the right places, where it will connect existing woodlands across urban and rural landscapes.
- Expand existing woodland and scrub sites, in the right places, including through natural regeneration, colonisation and other woodland fringe habitats.

Appendix 2e. List of existing strategies and plans used to inform the priorities and actions in the GM LNRS

The identification of opportunities, priorities and actions for the strategy were built upon a strong platform of existing plans and strategies which have already been published across Greater Manchester. All of these documents listed below were reviewed when building our long list of priorities for nature recovery and also helping to identify possible actions for priorities:

- Greater Manchester Biodiversity Action Plan (2008)
- An ecological framework for Greater Manchester (2009)
- Greater Manchester's Trees and Woodland Strategy (2018)
- Greater Manchester Forest Plan (2020-2029)
- Local plans and core strategies
 - Bury Unitary Development Plan (1991)
 - Bolton Local Development Framework (2011)
 - Manchester Local Plan and Core Strategy (2012-2027)
 - Oldham Unitary Development Plan (2006)
 - Rochdale Local Plan and Core Strategy (2016)
 - Salford Local Plan, Development Management Policies and Designations (2023)
 - Stockport Core Strategy (2011-2027)
 - Tameside Unitary Development Plan (2004)
 - Trafford Local Plan and Core Strategy (2012)
 - Wigan Local Plan and Core Strategy (2013) Wigan UDP [Written statement of retained policies] (2006)
- Climate change strategies
 - Bolton Climate change strategy (2021)
 - Wigan Climate change strategy (2020)
 - Rochdale's Climate change strategy and delivery plan- a partnership approach (2021 – 2025)
 - Stockport Climate Action Now (2019)
 - Tameside Carbon and Environment Strategy (2021)
- Local Biodiversity and Green Infrastructure strategies
 - Manchester Our Rivers Our City (2021)
 - Manchester's Great Outdoors - a green and blue infrastructure strategy for Manchester (2015-2018)
 - Bolton Climate Change Strategy - A Joint Framework for Bolton to Act on (2021)
 - Tameside Carbon & Environment Strategy (2021)
 - Trafford Council Tree policy (2023)
 - Bury Biodiversity Strategy (2023)
 - Stockport's Ecological Network (2020)
 - Oldham Council Green Infrastructure Strategy (2022)
 - Manchester City Council Biodiversity Strategy (2022)
 - Peak District National Park Authority Nature Recovery Plan (Draft 2024)
 - Stockport Council Wildflower Grasslands (2021)
- Catchment plans
 - Upper Mersey Catchment Plan (2021) and Lower Mersey Catchment Plan (2021)
 - Irwell Catchment Plan (2019)

- Douglas Catchment Plan (2019)
- Places for Everyone (2023)
- Lancashire Wildlife Trust 2030 strategy
- National Character Areas (NCA) profiles and objectives for all 6 NCA overlapping with GM
- NHS code green delivering net zero carbon at Manchester university NHS foundation trust 2022-2025
- GM NHS Green Plan

Endnotes

¹ Defra and Natural England (2023) Species recovery within Local Nature Recovery Strategies – advice for Responsible Authorities

² Defra (2024) Mapping potential measures in Local Nature Recovery Strategies – advice for Responsible Authorities

³ Defra (2024) Data Standards Advice for Local Nature Recovery Strategies - advice for Responsible Authorities