

Mapping potential measures in Local Nature Recovery Strategies

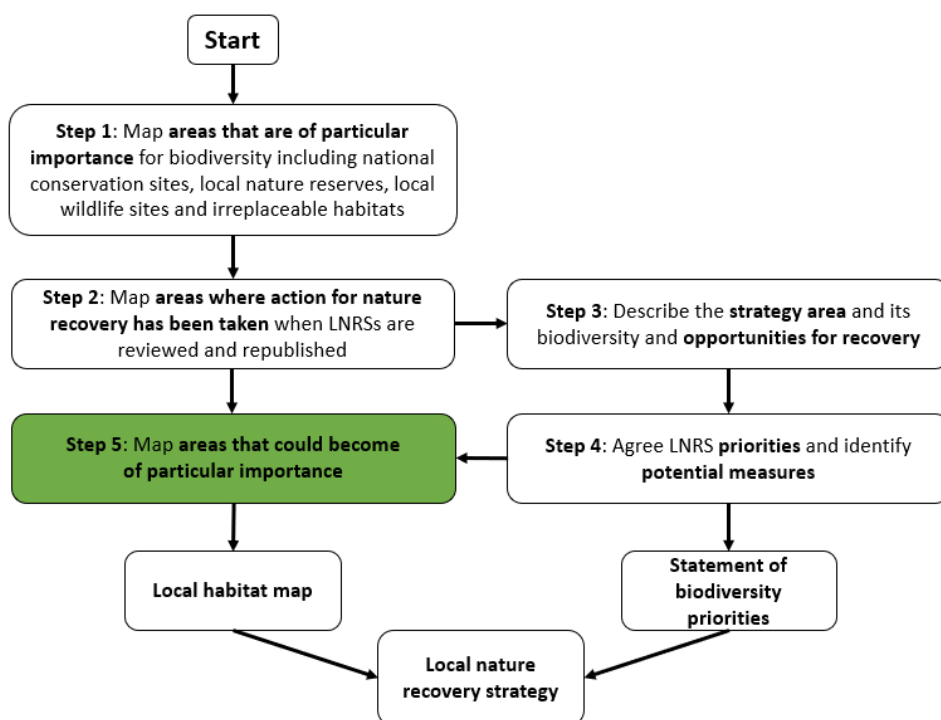
Advice for Responsible Authorities

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Overview

The main purpose of an LNRS is to identify locations to create or improve habitat most likely to provide the greatest benefit for nature and the wider environment. This is to enable effort and resource to be targeted where it will have greatest impact and to encourage more coordination in habitat creation and improvement activities.

The Environment Act requires that all LNRS must identify these “areas that could become of particular importance” and the LNRS statutory guidance sets out how these areas should be identified as the culmination of preparing an LNRS. This process is summarised by the diagram below, which illustrates how locations suitable for carrying out potential measures to achieve the LNRSs priorities are added to a map of areas that are already of particular importance for biodiversity to identify areas that could become of particular importance – linking together all the elements of the LNRS.



Which potential measures are mapped, how potential measures are mapped, and the usability of the finished Local Habitat Map will be critical factors in the success of each LNRS in directing collective effort towards carrying out the most impactful actions for biodiversity and the wider environment.

This advice is intended to help responsible authorities (RAs) to transpose their written list of potential measures into mapped potential measures. It sets out:

- Which potential measures RAs should seek to map
- How to approach mapping potential measures in areas that are already of particular importance for biodiversity
- What to consider when mapping
- Hints and tips to help with mapping

This advice should be read alongside the [LNRS statutory guidance](#) and data standards advice.

Which potential measures to map

LNRS statutory guidance states that RAs should identify areas that could become of particular importance based on their suitability for carrying out potential measures set out in their LNRS's Statement of Biodiversity Priorities. Through this process RAs can identify what action to take where to make the greatest contribution to the strategies priorities and to nature's recovery (see "What to consider when mapping" on page 7). It is not, however, expected that all of the measures set out in the Statement of Biodiversity Priorities will be mapped on to the Local Habitat Map. There are a number of reasons why this may be the case, including:

1. **The potential measure does not relate to or support habitat creation or improvement** – the statutory guidance says that most potential measures should be ways of enhancing existing habitat and creating new habitats, but that RAs may find it helpful to include a smaller number of potential measures which do not involve creating or improving habitat which are necessary to achieve a strategy priority. For example, reducing unnecessary use of pesticides to help pollinating insects. However, it is only the potential measures that would directly lead to the areas where they are carried out becoming of greater importance for biodiversity and the wider environment which should be mapped. This is likely to mainly mean action to directly create or improve habitat for biodiversity, and the statutory guidance states that potential measures should clearly state the habitat type which they relate to so suitable locations can be mapped more easily. It could, however, also include actions which indirectly make the area of greater importance, such as control of invasive species or reducing recreational disturbance of sensitive species.
2. **The potential measure would be similarly beneficial over wide areas** – the statutory guidance includes examples of some potential measures which would be widely beneficial, such as sowing native nectar-rich wildflowers. Or would be beneficial in certain types of areas, such as planting native trees in urban areas. That is not to say that such potential measures should never be mapped as areas that could become of particular importance. Instead, mapping should be targeted to where such potential measures would be of greatest importance, for example in creating greater connectivity between existing areas of habitat or where there is good evidence that a contribution to wider environmental benefits, such as flood risk mitigation, is possible.
3. **Carrying out the potential measure would not have sufficient impact** – the purpose of mapping potential measures is to identify areas that could become of particular importance. This indicates firstly that the potential measure should be capable of increasing the importance of the area (rather than simply maintaining it) and secondly that it is plausible that the location would become particularly important – for biodiversity and/or for benefits to the wider environment – if the potential measure is carried out as intended.
4. **It was not possible to find a suitable location to carry out the potential measure** – LNRSs are seeking to strike a balance between ambition and deliverability in what they propose. There may be circumstances where it is helpful for an RA to highlight that a potential measure would be highly desirable, or a longer-term ambition, by including it in their Statement of Biodiversity Priorities even though no feasible location for delivery could currently be found. For example, re-naturalising a heavily-modified river which would require fuller engagement with local people to identify a suitable location.

Judging whether a potential measure is sufficiently impactful to map is not a black and white decision. As the statutory guidance recognises, the benefit that a potential measure can provide for biodiversity or the wider environment will be dependent on where it is carried out and how it is carried out. It is also possible for potential measures to be adapted or combined with complementary potential measures to form a package. This point is explored in more detail on page 7.

It is recognised that there will be areas of existing habitat that are already important for biodiversity but which do not fall into the categories of land, such as SSSIs or Local Wildlife Sites, which RAs should map as “areas of particular importance for biodiversity” (Step 1 of LNRS process) RAs are encouraged to include these areas within their Local Habitat Map as “areas that could become of particular importance” by proposing potential measures to secure further improvement in their biodiversity or environmental value. The improvement possible may be less than for areas of lower current importance but the potential measure should still be intended to improve (rather than simply maintain), the area where it would be carried out, in keeping with the wider purpose of the LNRS.

Potential measures included in the Statement of Biodiversity Priorities but not in the Local Habitat Map have an important role to play which complements the mapping of “areas that could become of particular importance”. As the Statutory Guidance states, the main purpose of LNRSs is to identify locations to create or improve habitat most likely to provide the greatest benefit for nature and the wider environments. Targeting action in this way is crucial for making best use of the resources available for improving the way land is managed for biodiversity and the wider environment. But for nature to recover other action is also needed.

As the statutory guidance suggests, the Statement of Biodiversity Priorities can include potential measures intended to encourage widespread participation in nature recovery, like planting native hedgerows. It can also include potential measures which:

- help reduce pressures limiting nature’s ability to recover, like reducing use of pesticides, or
- promote behaviours that can help nature recover in other areas, like using peat-free compost, or
- improve understanding of where rare species are present or how populations are changing by carrying out surveys or monitoring, or
- are impactful if applied at large scale (i.e. extensive) rather than making specific locations particularly important, like better targeting the application of fertiliser to meet crop needs.

Whilst these activities can make an important contribution to nature recovery it would not generally seem reasonable to suggest that they could, on their own, lead the area where they are carried out to become particularly important for biodiversity or the environment, which is what the mapping of potential measures is seeking to identify.

RAs should try to make it clear in their Statement of Biodiversity Priorities which potential measures they are mapping and which they are not. As with mapped potential measures, RAs should think about who it is that they are expecting to act on potential measures which are not mapped and present the potential measures to make it as clear as possible what the strategy is proposing that they should do. This may include potential measures which would help support, or even be essential for enabling, potential measures that they do map to identify areas that could become of particular importance. For example, increased management of deer populations which would be generally beneficial for woodland restoration across broad areas but also essential to allow woodland to establish in particular

mapped locations where planted saplings would otherwise be lost to browsing. Or removal of Himalayan Balsam throughout the strategy area, which could also be part of river restoration in targeted locations. In both of these examples, carrying out these activities only within the boundaries of the area that could become of particular importance is unlikely to be effective due to re-population from neighbouring areas.

RAs should consider how to use the Statement of Biodiversity Priorities and the Local Habitat Map together to enable landowners and managers to clearly understand the relationships between different potential measures, including where carrying out a potential measure that has not been mapped is necessary for a mapped potential measure to be successful.

How to approach mapping potential measures in existing “areas of particular importance for biodiversity”

Whilst the primary purpose of mapping potential measures is to identify areas that could become of particular importance, the statutory guidance suggests that RAs may wish to also map potential measures in existing areas of particular importance. This reflects the fact that some areas that have been formally designated or identified for their biodiversity importance may have declined in condition or may otherwise have the potential to be more important to biodiversity or the wider environment than they presently are.

The benefit of mapping potential measures in areas of particular importance is likely to vary considerably between different types of protected sites. Special Areas for Conservation (SACs), Special Protection Areas (SPAs), Sites of Special Scientific Interest (SSSIs), National Nature Reserves (NNRs), Marine Conservation Zones (MCZs) and Ramsar Sites, have strong legal protections and requirements in place regarding how they should and should not be managed. This means that it is unlikely that the LNRS process will generate useful new information about how these areas should be managed, or that it would be legally acceptable to manage these areas significantly differently from what has already been proposed.

RAs may still wish to reflect existing agreed actions for managing these most highly protected designations in their LNRS, but they are not required to do so as this is unlikely to affect whether necessary actions are undertaken. LNRSs can, however, play an important role in identifying areas that could become of particular importance around or near existing highly protected sites to link or expand existing habitat, or buffer the protected areas from offsite pressures or impacts. For example, targeting action to improve water quality flowing into protected wetlands through habitat creation.

There is much greater potential for LNRSs to be of benefit in mapping potential measures in Local Wildlife Sites (LWS) and areas of irreplaceable habitat (IH). These areas should be included in the Local Habitat Map as existing “areas of particular importance for biodiversity”, but there are fewer restrictions on how they should be managed, and it is less likely that there are existing plans for how they could be improved (except for areas of IH inside protected sites). LWS and areas of IH (outside protected sites) can also be improved to help meet biodiversity net gain requirements and carrying out potential measures proposed by the LNRS in these locations would therefore benefit from the 15% uplift. This means that mapping potential measures in and around LWS and areas of IH can play an important role in encouraging their improvement.

LWS and areas of IH where potential measures have been mapped should still be included in the Local Habitat Map as “areas of particular importance” and should not be mapped as “areas that could

become of particular importance” (or both). As explained in the data standards advice, RAs should include a separate data layer of locations where potential measures have been mapped when they provide their final LNRS to Government. RAs do not need to provide this information separately in the LNRS they publish. However, it should be clear from the Local Habitat Map which “areas of particular importance” have which potential measures mapped to them.

What to consider when mapping

There is no single best way to map potential measures. It is expected that approaches will vary depending on local circumstances and we are keen that RAs across the country share experiences and good practice.

The most important thing for an RA to keep in mind when mapping is **“Would it be clear to someone using the Local Habitat Map what actions are being proposed, where they are being proposed, and why these actions are being proposed as the most important things to be doing?”**. Being clear to potential end user on what is being proposed and why will help ensure that the LNRS is actionable and persuasive. These qualities are crucial for the LNRS to be successful in driving positive change on the ground. RAs are encouraged to keep this question in mind throughout the process of mapping potential measures onto the Local Habitat Map, and to be confident that their finished LNRS addresses this effectively.

Paragraphs 73 – 93 of the LNRS statutory guidance provide the basis of how RAs should go about mapping potential measures. This includes important factors such as:

- Involving partners
- Use of modelling
- Use of existing plans and strategies
- Capturing planned and ongoing work
- Listening to landowners and managers
- Thinking about regulatory or permitting requirements
- The role of “white space”
- Focussing on Protected Landscapes and Green Belt
- Balancing ambition and deliverability

Clarity

Section 73-93 of the statutory guidance does explicitly refer to the need for transparency, but this is an overarching principle of the guidance as a whole and is an important prerequisite for building support for delivery of what the strategy proposes. For mapping of potential measures, transparency means being able to clearly explain how the mapping has been undertaken i.e. what process has been followed, who has been involved, what evidence and data has been used and how decisions have been taken. This information should be included in the LNRS or provided alongside it where it is published.

The section of the statutory guidance on “How to present the strategy” (paragraphs 94 – 98) emphasises the need for LNRSs to be practical documents which can be understood by a range of users and for the Local Habitat Map to be simple and uncluttered and for it to be straightforward to access basic information about the mapped locations. For mapping of measures, this means making it as clear as possible which potential measures are being proposed where. It also means creating a clear line of sight back to the priorities that the potential measures are seeking to address so that landowners and managers can understand why a particular activity is being proposed. This will enable the landowner

or manager to take a better-informed choice about whether or not to take the action the LNRS proposes.

Impact

As referred to on page 3 of this advice, the purpose of mapping potential measures is to identify areas that could become of particular importance for biodiversity and/or for benefits to the wider environment. This indicates that the potential measure proposed should be capable of significantly improving the importance of the area where it is carried out, if undertaken as intended. The statutory guidance highlights the need for potential measures to be “biodiversity positive” i.e. that wider environmental benefits need to be achieved through increasing biodiversity, not instead of it. And that how positive a potential measure is for biodiversity will depend on where, when and how it is carried out, not just the potential measure itself.

When considering whether what is being proposed is sufficiently impactful it is helpful to bear in mind the role that LNRSs have in targeting habitat creation or improvement to meet mandatory biodiversity net gain requirements. In effect, **the 15% strategic significance uplift means that a developer will need to create or improve less habitat if the habitat intervention is consistent with the potential measure proposed for that location by the LNRS. RAs should therefore be confident that the potential measures they map will lead to sufficient additional benefit to justify less habitat being created or improved as a result.** To be attractive for funding from biodiversity net gain it is required that the potential measure would need to contribute to an increase in the biodiversity value in accordance with the statutory biodiversity metric (i.e. increase either what the metric refers to as “distinctiveness” or “condition”, depending on whether habitat is being created or improved). This supports what the statutory guidance describes as the main purpose of LNRSs – to identify locations to create or improve habitat most likely to provide the greatest benefit for nature and the wider environment.

To be confident of the additional benefit of what is being proposed RAs can, as the statutory guidance says, adapt potential measures to ensure that they are more impactful in the location where they are proposed. RAs can also combine complementary potential measures to form packages that should be carried out together to have greater impact. RAs should think carefully about how to express more complex potential measures. For instance, a potential measure that combines improving an existing habitat with creating new habitat around it (for example, restoring existing chalk grassland as part of a mosaic of scrub and other habitats) could be misunderstood by the landowner or manager and lead to the loss of habitats that the LNRS is seeking to improve if not carefully explained. Similarly, if it is necessary for all elements of a potential measure to be carried out for it to be effective, this should be clearly explained. Focussing on more impactful interventions goes hand in hand with being targeted in identifying areas that could become of particular importance. The statutory guidance strongly discourages indiscriminate or widespread mapping and provides steers on how to address possible concerns about the “white space” that should inevitably result.

It is understood that it could sometimes be helpful to give landowners and managers options by proposing alternative potential measures in some areas that could become of particular importance, and the statutory guidance recognises that there will be situations where different potential measures would generate similar levels of benefit. But it is also important to keep in mind that the overall objective is to map the most beneficial actions given the evidence and agreed priorities. Providing too many alternatives also risks making it less clear what is actually being proposed – both in the particular location and the balance of potential measures across the strategy area as a whole.

Landowners and managers will consider a range of factors, such as financial benefit and ease of delivery, when assessing whether to change how they manage their land. If it is not made clear which form of management the LNRS is proposing as best for biodiversity or the environment in that location, then these other factors will play a bigger role. This could plausibly lead to widespread creation or improvement of the same habitat across wide areas if other factors support this, to the detriment of the LNRSs overall objectives.

Detail

The advice on data standards explores the potential for complex spatial relationships between different potential measures. The diagrams in Appendix 2 illustrate how potential measures could overlap each other or be nested within each other. For example, proposing to restore an existing pond within a wider area where woodland restoration is proposed. How often this will happen is linked to the broader question of how detailed the mapping of potential measures should be. To give users clarity about what is being proposed where, RAs are encouraged to provide as much detail as they can about the area to which the potential measure should apply. This spatial scale (i.e. geographic size and shape) is likely to vary significantly between potential measures depending on factors such as:

- (i) whether the potential measure would only be beneficial or deliverable in very specific locations;
- (ii) the availability of data or knowledge to identify specific beneficial locations;
- (iii) whether the potential measure is more beneficial if carried out on a large scale.

Trying to be specific when mapping potential measures will guard against action being taken that appear to be in line with the LNRS but does not actually deliver the intended benefits. For example, mapping a whole field for planting trees with the intention of increasing riparian shading could lead to tree planting at a significant distance from the riverbank, which does not deliver the proposed benefit. However, if it is not possible to map the potential measure with a sufficient degree of accuracy, RAs could guard against this sort of outcome by ensuring that the description of the potential measure is clear enough in explaining how it should be carried out. Similarly, if it is known that there are ponds within a woodland that it would be beneficial to restore, but not the location of each pond, an alternative approach would be to create a potential measure that covers both restoration of the woodland and existing ponds.

In considering what might be the “right” level of detail, both of mapping and in how the potential measure is described, it is particularly important to think about clarity for users – referring back to the overarching question at the beginning of this section. In doing so, RAs should consider whether a landowner or manager would reasonably understand what it is they should and shouldn’t do if they choose to take action on their land to support delivery of the LNRS. Consultation on the draft LNRS is an important opportunity to test this. Seeking to avoid examples of actions proposed by the LNRS not leading to a biodiversity benefit is important for maintaining the trust and support needed to drive the wider delivery of the strategies.

Connectivity

Expanding and connecting existing areas of particular importance is a fundamental objective of mapping areas that could become of particular importance for biodiversity. The hints and tips below provide some suggestions for how to do this, but some RAs may also choose to use computer modelling, or data based on modelling, to propose possible locations. Whilst this could be helpful it is, as the statutory guidance states, not a requirement and should be used to guide not dictate where areas that could become of particular importance are ultimately mapped. This means thinking critically about the right potential measures to propose in locations suggested by models and being open to

including different locations or removing locations if it is not clear that these areas are actually the most important to focus on. Being able to explain clearly how locations have been chosen, including a simple explanation of how models have been used and how those models work, is part of achieving the necessary clarity for end users.

Contribution to priorities & national environmental objectives

As RAs approach completion of their mapping of potential measures they should take stock of how well the mapped potential measures – in combination with the non-mapped measures in the Statement of Biodiversity Priorities – would, if enacted, drive forward the delivery of the strategies priorities and the range of national environmental objectives. RAs should look to achieve a balance across the objectives and a level of overall ambition that is consistent with that described in the Statement of Biodiversity Priorities. RAs should also check that they have considered the wider societal co-benefits, such as access to greenspace, that can be generated through mapping of potential measures in suitable locations.

Hints & tips to help with mapping

This section of the advice provides some practical suggestions for how to go about mapping potential measures. As RAs go through the mapping process we are keen that experience is shared with other RAs who have yet to do so to enable good practice to continue to develop. The suggestions below are not requirements and RAs can take other approaches which they consider reasonable.

- **Plan for an iterative approach** – It is likely that the creation of the local habitat map will require several rounds of development as versions are prepared, scrutinised and improved. This might include revisiting the potential measures themselves to refine, adapt, remove or consolidate them to make it easier to link them to locations, or to add detail to make it clearer how they should be delivered in a beneficial way.
- **Prioritise potential measures** – Look to find locations for those potential measures that you consider most important, or which support the most important priorities, first. This can draw on the short-listing undertaken as part of developing the priorities and potential measures (see separate advice on identifying priorities and potential measures).
- **Understand constraints on where potential measures are feasible** – Potential measures that would restore existing habitats can only be carried out where those habitats already exist. There may be more choice in targeting creation of new habitats, but it is important to understand what conditions different habitats require to establish successfully. A well-written Statement of Biodiversity Priorities description (Step 3 of LNRS preparation) can greatly help with this, but so can looking at the current or past distribution of the habitat in question – which will also support the expansion or better connection of existing habitats. RAs might wish to map potential measures for which there are few environmentally suitable locations before those where there are many. RAs should also consider where the use or ownership of land may place practical constraints on how it might be managed differently, for instance, air safety requirements near airfields.
- **Work with the landscape** – look at how landscape features such as lines of hills or river valleys can support better connectivity between existing and potential areas of particular importance.

- **Manage competing potential measures by trying to find different places** – It is likely that there will be situations where different partners will favour different potential measures in the same locations. For example, restoring existing grasslands or replacing them with native woodland. Where there are sufficient alternative locations to do so, seek to propose specific locations for both – drawing on landowner and manager views and relative benefit – rather than pursuing one priority to the detriment of another across the strategy as a whole.
- **Test with users** – involve potential end users of the strategies to get their view on whether it is clear to them what is being proposed, where and why.