

Measuring biodiversity

A biodiversity metric

In the “What is net gain?” section we recognise that biodiversity is complex and that no single approach can fully guarantee net gains for biodiversity. There are, however, simple and robust ways to measure the habitats that support biodiversity, and there are considerable benefits to mandating net gain through a single metric. Consistency means that all users of a metric, including local planning authorities, developers, ecologists, NGOs, communities and consultees, can become familiar with the workings of a metric and can focus on the quality of the inputs and outcomes more than the means of recording. It also means that less time should be taken processing applications, freeing up ecologists’ and developers’ time for more constructive input into scheme and habitat design. More fundamentally, it means that clear and certain obligations can be set, without having to account for varying interpretations through different metrics.

Our view is that an effective biodiversity net gain policy requires an approach to measurement that is:

- transparent and robust – an approach that is open to scrutiny by LPAs, local communities and consultees, and robust enough to give developers confidence that the measured gains will be sufficient to meet expectations.
- workable and practical – an approach that is proportionate to the scale of the potential impact and that can be implemented and scrutinised in a timely manner.
- consistent – we want to avoid the costs to LPAs and developers of processing assessments, and channel this expertise into the design of developments and habitats. Having a consistent metric should help to keep the focus of assessment on the outcomes and ecological advice, rather than the means of measurement.

We propose that, for biodiversity net gain, the Defra biodiversity metric would provide a suitable base metric upon which to set possible mandatory requirements. Over time, we can explore opportunities to develop the metric to make its assessment more sophisticated without significantly increasing the time or resources taken to use it (for example, by connecting it to potential future internet-based habitat mapping or biological records). This should help to address some existing limitations of the metric with regards to consideration of individual species and wider environmental value.

Natural England are already working to update the original version of the Defra metric to incorporate the best of the adaptations and amendments made by schemes and organisations over the past six years. Focussing government and industry resources onto one metric will mean that future updates should further improve the environmental and development outcomes and will have a much greater evidence base for possible alterations.

10. Is the Defra biodiversity metric an appropriate practical tool for measuring changes to biodiversity as a result of development?

11. What improvements, if any, could we most usefully make to the Defra metric?

How much 'gain'

Losing and recreating habitat inevitably involves some risks; for example, that compensation habitats won't reach their target state, or will take longer than expected to do so. The Defra metric accounts for some of these factors. It includes a factor for the difficulty of achieving the target habitat and for the time taken for habitats to be established. Therefore, we are confident that the Defra metric, and therefore the number of biodiversity units that must be created, is sufficient to mitigate and compensate for harm caused by the development. Nevertheless, to account for remaining uncertainties and risks, and to provide an overall gain for nature, we are including an extra margin.

Our initial view is that a 10% gain in biodiversity units would be a suitable level of net gain to require in order to provide a high degree of certainty that overall gains will be achieved, balanced against the need to ensure any costs to developers are proportionate. In practice, this means that if a site is worth 50 biodiversity units before development, the site (and any offset sites and tariff payments) should be worth 55 units at the scheme's conclusion. The proposed 10% would be a mandatory national requirement, but should not be viewed as a cap on the aspirations of developers that want to voluntarily go further or do so in the course of designing proposals to meet other local planning policies.

12. Would a mandatory 10% increase in biodiversity units be the right level of gain to be required?

Mitigation hierarchy

The mitigation hierarchy is a central and valued principle of environmental planning. It broadly states that development should:

- Avoid impacts,
- Minimise impacts,
- Remediate/restore habitats affected by impacts , and
- As a last resort, compensate for any residual harm through habitat creation or restoration.

This hierarchy is reflected in national planning policy, and local planning documents. The introduction of biodiversity net gain would not weaken, undermine or replace the mitigation hierarchy, and the process of achieving net gain is entirely compatible with the proper application of the hierarchy. Industry guidance and principles stress the importance of the mitigation hierarchy in applying net gain approaches.

In circumstances where, due to proper application of the first stage of the hierarchy, development will result in minor losses of habitats which are not of particular value to wildlife, it is clear that compensating for these losses at a site level might not always

provide the best outcomes for wildlife. In some cases, it might be advantageous in conservation and development terms to allow for a greater proportion of residual impacts than usual to be dealt with through off-site compensation or tariff contributions. This would allow pooling of the investment to secure greater strategic environmental gains. It is recognised that any such allowance could, however, present a risk of readily granting permission to degrade the site of the development, and so clear guidance on appropriate circumstances would need to be introduced. These might refer to the size of the site, its ecological or other importance in the local context, and the distinctiveness of the constituent habitats.

Such allowances would not in any way compromise the operation of the mitigation hierarchy on sites which are not within the clearly defined circumstances.

13. In clearly defined circumstances, should developers be allowed to pay through the tariff mechanism without fully exhausting on-site and local compensation opportunities?

Spatial preference

In an approach that considers both on-site and off-site environmental improvements, there needs to be careful consideration of where we want habitats to be delivered. To some extent, this issue is resolved by the application of the mitigation hierarchy, as avoidance, minimisation and remediation of impacts will be restricted to the site and its immediate surrounds.

Where compensatory habitat creation or enhancement is required to achieve net gains, this can be delivered within the site, nearby to the site or nationally to address national conservation priorities. Evidence from stakeholders suggests that local delivery is preferable because it prevents any one local area from losing significant amounts of habitats and provides benefits for the communities which are affected by development in the first instance. It is desirable to prevent local ‘pockets’ of habitat loss because it could reduce connectivity between local habitats, and could compromise local residents’ access to nature. The Defra metric already includes a simple multiplier to incentivise the delivery of compensation measures in local or strategic locations.

We propose that a spatial hierarchy underlines the design, updating and operation of the entire net gain approach. This would mean that, where possible, biodiversity units should be delivered on site. Those that cannot viably be delivered on site should be delivered locally, according to a local plan or strategy. Where suitable compensatory habitats are not available locally, then investment in national conservation priorities may take place through a tariff. This principle could be communicated through guidance and be incentivised through the operation of the Defra metric and the pricing of the tariff (see “Tariff rate” section) so that distant habitat creation is generally more expensive than delivering habitats on site or locally.

14. Would this be an appropriate approach to directing the location of new habitat?

Assessment of habitat type and condition

A standardised approach to biodiversity net gain should result in less investment in reporting and negotiation between LPAs and developers, and more investment in creating nature-friendly development and new habitats for wildlife.

Currently, the ecological reports that explain a development's impacts can sometimes be inaccessible to the public, the developer and even to the LPA officer. The technical detail within them is important, but there is rarely a simple explanation of what habitat is being lost and what is being gained. At present, developers will most often use their own in-house ecologists or contract ecological consultants to undertake ecological assessment of potential development sites. For smaller sites, the ecological assessment might be undertaken by non-specialist staff.

The greater transparency and consistency of a completed biodiversity metric would (because it states exactly what habitats are lost and gained) reduce uncertainty for developers when designing schemes, and for communities and planning officers when assessing a potential development. In order to most effectively meet the housing and other development needs of local communities we are considering how else net gain can improve the planning process for all involved and ensure that the assessment of habitats is accurate and cost effective.

In the future, there could be the potential for meeting survey requirements for certain habitats or types of developments through the use of area-wide surveying and improved satellite or remote sensing habitat mapping; these methods would need development and evaluation before they were widely implemented to ensure that such approaches are robust and would not result in misidentification or loss of distinctive habitats.

15. How could biodiversity assessments be made more robust without adding to burdens for developers or planning authorities?

Baseline

Understanding whether net gain is achieved through development at a national scale will require better habitats data at a national scale. Defra is currently exploring how national metrics and mapping might help to support the establishment of a baseline, and to chart progress against it. This is discussed further in the later “Quality assurance” section.

On a development scale, the baseline for voluntary biodiversity net gain is generally taken to be the point at which a planning application is submitted; the incentive to intentionally degrade habitat prior to assessment is low under voluntary schemes because there is an expectation that the developer intends to leave a positive legacy.

If net gain were made mandatory, there could be a stronger incentive for some developers and landowners to degrade their land in advance of seeking permission to develop it. There are reported cases of suspected pre-consent habitat degradation under the current planning system, although it is not known whether this is a regular occurrence. These include cases of vegetation clearance and the disturbance of protected species. Landowners may be incentivised to degrade their land to reduce environmental obligations long in advance of its sale for development.

In a mandatory net gain policy this risk could be mitigated by:

- Clear guidance for developers and planning authorities on the relevant assessment baseline including how to take account of recent or even historic habitat states where there is evidence of deliberate habitat degradation. Consideration should be given to how to avoid the risks of penalising landowners making legitimate land use change decisions before deciding to sell their land for development.
- The use of existing land cover data to provide approximate fixed baselines of habitat type. For example, providing spatial data that would tell an LPA whether a site was wooded, grassland or bare ground in 2017 and broad habitat categories from existing aerial imagery of urban areas. Setting a fixed temporal baseline will also help government to monitor trends in habitat cover over the longer term, and to assess whether net gain is being delivered. The habitat data would need to be robust and readily accessible to LPAs and the Planning Inspectorate.

16. Should a baseline map of broad habitats be developed?

17. Should this be applied, as a minimum baseline, to:

- a. net gain calculations for all development?**
- b. net gain calculations in cases of suspected intentional habitat degradation?**

18. What other measures might reduce the risk of incentivising intentional habitat degradation?

19. How can the risks of penalising landowners making legitimate land use change decisions before deciding to sell their land for development be mitigated?