



Department
for Environment
Food & Rural Affairs

Technical consultation on the biodiversity metric

Date: 2 August 2022

We are the Department for Environment, Food and Rural Affairs. We're responsible for improving and protecting the environment, growing the green economy, sustaining thriving rural communities and supporting our world-class food, farming and fishing industries.

We work closely with our 33 agencies and arm's length bodies on our ambition to make our air purer, our water cleaner, our land greener and our food more sustainable. Our mission is to restore and enhance the environment for the next generation, and to leave the environment in a better state than we found it.



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How to respond

Consultation questions are included in Parts 2 to 3 of this document.

Respond by 27 September 2022, using the online survey on Citizen Space (our online consultation system) accessible via GOV.UK.

Responses, comments or enquiries can also be sent by email to netgainconsultation@defra.gov.uk or by post, specifying which questions you are responding to:

Technical consultation on the biodiversity metric

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This consultation is in line with the UK government's consultation principles. This can be found on GOV.UK.

Representative groups are asked to give a summary of the people and organisations they represent and where relevant who else they have consulted in reaching their conclusions when they respond.

Confidentiality and data protection information

A summary of responses to this consultation will be published on GOV.UK. An annex to the consultation summary will list all organisations that responded but will not include personal names, addresses or other contact details.

Defra may publish the content of your response to this consultation to make it available to the public without your personal name and private contact details (for example, home address, email address).

If you click on 'Yes' in response to the question asking if you would like anything in your response to be kept confidential, you are asked to state clearly what information you would like to be kept as confidential and explain your reasons for confidentiality.

The reason for this is that information in responses to this consultation may be subject to release to the public or other parties in accordance with the access to information law (these are primarily the Environmental Information Regulations 2004 (EIRs), the Freedom of Information Act 2000 (FOIA) and the Data Protection Act 2018 (DPA)).

We have obligations, mainly under the EIRs, FOIA and DPA, to disclose information to particular recipients or to the public in certain circumstances. In view of this, your explanation of your reasons for requesting confidentiality for all or part of your response would help us balance these obligations for disclosure against any obligation of confidentiality.

If we receive a request for the information that you have provided in your response to this consultation, we will take full account of your reasons for requesting confidentiality of your response, but we cannot guarantee that confidentiality can be maintained in all circumstances.

If you click on 'No' in response to the question asking if you would like anything in your response to be kept confidential, we will be able to release the content of your response to the public, but we won't make your personal name and private contact details publicly available.

There may be occasions when Defra will share the information you provide in response to the consultation, including any personal data with external analysts. This is for the purposes of consultation response analysis and provision of a report of the summary of responses only.

Please find our latest privacy notice uploaded as a related document alongside our consultation document.

Part 1: Overview

Natural England published the [biodiversity metric 3.1](#) and an updated [small sites metric](#) in April 2022. This publication included:

- biodiversity metric 3.1 and small sites metric calculation tools
- user guide (and short user guide)
- technical supplement
- Geographical Information Systems (GIS) data import tools and guidance
- a summary of the key changes from biodiversity metric 3.0
- frequently asked questions
- case studies

We have designed the calculation tools with Natural England to be ecologically robust but simple to use. They are intended to provide consistency and transparency for developers, ecologists, and Local Planning Authorities (LPAs).

1.1 Purpose of this consultation

The Secretary of State for Environment, Food and Rural Affairs has a statutory obligation under the Environment Act 2021 to consult on a biodiversity metric for measuring biodiversity net gain. Following this consultation, the statutory metric will be produced and published by the Secretary of State pursuant to the requirements of the Environment Act 2021. This consultation proposes that the statutory metric (version 4.0) will be based on updates to biodiversity metric 3.1 and the small sites metric. Responses from this consultation will be incorporated into the updates made.

The statutory metric will be used for assessing biodiversity net gain for Town and Country Planning Act 1990 development and Nationally Significant Infrastructure Projects when the relevant biodiversity net gain requirements of the Act come into force.

We plan to publish the statutory metric (including the small sites metric) in late 2022. This will give up to a year of use before mandatory biodiversity net gain commences from November 2023 for Town and Country Planning Act 1990 development. We will then make regular but infrequent future updates. These will be according to a clear, public timeline that allows projects to plan for updates.

We are grateful for the recommendations provided by industry and the environmental sector. We are continuing to work to address these. We want future updates to the statutory metric to remain based on regular feedback, including responses to this consultation.

1.2 What is the biodiversity metric?

The biodiversity metric is a tool that scores different habitat types based on their relative value to wildlife. The metric's purpose is to calculate and measure biodiversity losses and gains for developments under the Town and Country Planning Act 1990 and the Planning Act 2008 (Nationally Significant Infrastructure Projects). The metric is currently in a spreadsheet format. In the long term we aim to publish an online version of the metric.

Baseline, or pre-development, 'biodiversity units' are calculated by multiplying scores for a habitat's:

- distinctiveness (based on the type of habitat and its distinguishing features¹)
- area (hectares or squared metres in the small sites metric) or length (kilometres or metres in the small sites metric)
- condition
- strategic significance (value given to habitats located in optimal locations or which meet local objectives for biodiversity)

Post-development biodiversity units are calculated using the above and these additional risk factors:

- temporal risk (time taken for a created or enhanced habitat to reach target condition)
- delivery risk (difficulty in creating or enhancing habitat)

Off-site habitat interventions (all land outside of the on-site boundary, regardless of ownership) require an additional risk factor:

- spatial risk (distance of habitat creation or enhancement from the development or location of land use change)

Changes in biodiversity value can then be calculated from the difference in baseline and post-development units.

1.2.1 The small sites metric

The small sites metric is intended to be a simplified version of the biodiversity metric, incorporating only low or medium distinctiveness habitats. This includes hedgerows and arable field margins.

¹ Features of habitats contributing to their distinctiveness: consideration of species richness, rarity (at local, regional, national, and international scales), the extent to which it is protected by designations and the degree to which a habitat supports species rarely found in other habitats.

The small sites metric can only be used when both criteria 1 and 2 are met:

1. The development is either:
 - residential:
 - fewer than 10 residential units on a site area less than 1 hectare
 - number of residential units is not known on a site area less than 0.5 hectares
 - non-residential:
 - the site area is less than 0.5 hectares
2. There is no high or very high distinctiveness habitat within the development area. These are [Habitats of Principal Importance](#) and their definitions are provided by the Joint Nature Conservation Committee.

The small sites metric can be completed by a competent person. This is defined in the [small sites metric calculation tool user guide](#) as a person “who is confident in identifying habitats present on the site before the development and identifying the management requirements for habitats which will be created or enhanced within the landscape design”. This definition differs from the biodiversity metric 3.1 user guidance which is discussed in Part 3.

1.3 Previous feedback and suitability of biodiversity metric 3.1

Defra published a [consultation on biodiversity net gain regulations and implementation](#) in January 2022. Biodiversity metric 3.0 was the current version at the time of publishing that consultation.

Question 16 of that consultation asked if more process simplifications would help to reduce the burden for developers of small sites. We will aim to address responses to question 16, and others that mention the biodiversity metric.

Part 2: Proposals for the statutory metric

We want to make the following changes to the published biodiversity metric 3.1 and small sites metric before publishing the statutory metric:

- highlighting units required to meet the required percentage of net gain. This could help steer users to suitable compensation projects
- adjustments to the spatial risk multiplier and wider values
- changes to guidance for use alongside the calculation tools

The questions in this section reflect those short-term changes and any other changes which are needed before we publish the statutory metric. In Part 3, there will be an opportunity to provide comments and suggestions on our plans for longer-term improvements to the biodiversity metric.

2.1 Highlighting units required

The biodiversity metric currently shows the percentage change after post-development habitat interventions have been included. If on-site and off-site interventions do not meet the required net gain percentage, the user needs to work out what further enhancement is needed. We think it would be more helpful to show the current unit shortfall and any like-for-like trading rules for each habitat type. Trading rules applied by the biodiversity metric require that any loss of habitat be replaced on a 'like for like' or 'like for better' principle. This could help users see which habitats need to be created or enhanced to achieve biodiversity net gain.

We also want to show whether the net gain percentage requirement has been met, in other tabs of the calculation tool. This could make the biodiversity metric more useful for scheme designers.

2.2 Spatial risk multiplier and wider value adjustments

Multipliers in the biodiversity metric reflect the risks of creating and enhancing habitats and include:

- temporal risk
- delivery risk
- spatial risk (off-site interventions only)

For any off-site changes, the spatial risk multiplier reflects the distance of habitat changes from the development site, whilst incentivising delivery close to the development impact. Table 1 shows the multipliers for development impacts at different distances.

The biodiversity net gain credits pilot identified that the spatial risk multiplier can generate negative scores for reasonable habitat enhancements on distant sites with high or moderate baseline values. These results may incentivise the creation of lower distinctiveness habitats. Although these may be more likely to successfully establish, they may not always be the best option to support nature recovery.

We are aware that Nationally Significant Infrastructure Projects (NSIPs) often cover multiple local planning authorities. We will work with Natural England to clarify how the spatial risk multiplier is applied for NSIPs.

As a priority, we want to review a potential issue with the current application of the spatial risk multiplier. We are looking at either adjusting the formula or spatial risk multiplier values to reduce the likelihood of negative outcomes whilst still incentivising delivery close to the development impact.

We are aware that the combination of various multipliers can sometimes generate fewer biodiversity units for high distinctiveness habitats. The long-term plan is to review the interaction of all metric multipliers in different scenarios. This is so the metric can continue

reinforcing the mitigation hierarchy and facilitate the creation of appropriate habitats in suitable locations. We would welcome views on longer-term updates to other multipliers in Part 3.

Table 1: Spatial risk multiplier applied per habitat type

Score	Area habitats (excluding intertidal habitats) Hedgerows and lines of trees	Intertidal habitats	Rivers and streams habitats
1.0	Compensation inside Local Planning Authority or National Character Area ² of impact site	Compensation inside same Marine Plan Area, or deemed to be sufficiently local, to site of biodiversity loss	Within waterbody ³
0.75	Compensation outside LPA or NCA of impact site but in neighbouring LPA or NCA	Compensation outside same MPA but in neighbouring MPA	Within catchment
0.5	Compensation outside LPA or NCA of impact site and beyond neighbouring LPA or NCA	Compensation outside MPA of impact site and beyond neighbouring MPA	Outside catchment

Question 1: Do you think that the spatial risk multiplier values need reconsidering to better incentivise high value off-site delivery?

- Yes (provide reasons for this answer)
- No (provide reasons for this answer)
- Other
- Do not know

² There are 159 [National Character Areas](#). These broad divisions of landscape form the basic units of cohesive countryside character, on which strategies for both ecological and landscape issues can be based.

³ For rivers and streams, the waterbody or catchment is the defining boundary. For those rivers and streams too small to form an Environment Agency classified waterbody, the 'waterbody' would be defined as the waterbody that the tributary feeds into.

2.3 Supporting users in proposing realistic on-site habitats

Biodiversity metric 3.1 is not intended to be a tool that provides habitat creation guidance or replaces ecological expertise. But we are aware that some local planning authorities are having to challenge proposed habitat interventions particularly within development sites. This can happen when proposed habitats are too small to be ecologically functional or are unlikely to be deliverable given the site characteristics.

We are considering if we could provide greater clarity for developers and local planning authorities. This may include considerations for deciding which habitats are achievable on-site. This would help to steer developers towards deliverable proposals to help wildlife.

These considerations could be incorporated through:

- the biodiversity metric user guide
- other guidance
- asking professional bodies to consider providing them

Suggestions for indications of feasibility have included minimum viable areas (or lengths) for proposed habitat types. Wider factors affecting what habitats are achievable within a development site should still be considered.

Question 2: Do you think that providing guidance on considerations for what habitats can be typically achieved on-site would be helpful?

- Yes (if you have ideas on how this should work, provide us with details)
- No
- Other
- Do not know

2.4 Biodiversity metric guidance and case studies

We want to reduce the size of the biodiversity metric user guide. The shorter version of the guide would include information on completing the condition assessments, the calculation, and rules and principles for applying the metric. The sections that we remove, which might still be helpful for newer users, could then be provided in a separate document.

Case studies provide more specific guidance for using the metric in different contexts. These were first published with biodiversity metric 3.1. Natural England are producing further case studies.

We are aware of the difficulties faced by minerals projects in accurately measuring biodiversity net gain. This is due to the nature of their phased approaches, unusual substrates, and long timescales. We are planning to add specific guidance in the metric user guide to help accommodate these. This will allow for multiple stages of metric

submissions for minerals developments. It could also provide greater scope for deciding appropriate multipliers with the local planning authority's agreement.

Question 3: Do you have any suggestions for additional case studies that we should produce?

- Yes (provide reasons for this answer)
- No
- Other
- Do not know

Question 4: Do you agree with the described measures and proposals to help with applying the metric to minerals developments?

- Yes (provide any further suggestions)
- No (explain why not)
- Other
- Do not know

2.5 Further improvements for the statutory metric

Question 5: Are there any improvements you would make to the following components of biodiversity metric 3.1 in the short-term, regarding user-friendliness, simplicity or function?

Provide details, specifying which element (a to f) they relate to.

- a) the metric calculation and tool (the spreadsheet, values, and calculations)
- b) user guide (including the rules and principles for using the metric)
- c) habitat condition sheets (included in the technical supplement)
- d) GIS data import tool (currently not part of the small sites metric)
- e) case studies
- f) small sites metric

Question 6: Do you think there are other biodiversity metrics that should be considered alongside biodiversity metric 3.1 for measuring mandatory biodiversity net gain?

- Yes – for both Town and Country Planning Act 1990 and Planning Act 2008 developments (provide reasons for this answer)
- Yes – for Town and Country Planning Act 1990 developments (provide reasons for this answer)
- Yes – for Planning Act 2008 developments (provide reasons for this answer)
- No
- Other
- Do not know

Part 3: Proposals beyond version 4.0

3.1 Frequency of metric updates and transition arrangements

3.1.1 Timeframes for updates

The Environment Act states that “The Secretary of State may from time to time revise and republish the biodiversity metric.” Proposed timeframes for upcoming major and minor updates are shown in Table 2. We will provide an indication of upcoming updates before publishing to provide adequate lead in times for projects. After publishing the statutory version, we do not expect to make another major update before 2025.

For new planning applications (for Town and Country Planning Act 1990 development and Planning Act 2008 development) we will set out how future metric updates should be phased.

For projects in an advanced stage of the consenting process, they will continue using the version of the biodiversity metric they started with and will not be required to transfer to the updated version.

Table 2: Content, timeframes, and consultation requirements for updates

Update	Changes to metric	Timing	Formal consultation requirement?
Minor	Text clarifications and error corrections	As required	No (subject to requirements of the Environment Act)
Major	More substantial revisions that do alter biodiversity unit values generated	Every 3 to 5 years from 2023	Yes

3.1.2 Principles and objectives

Major updates to the statutory version will be informed by:

- new ecological evidence
- wider national conservation priorities, including the Environment Act targets set for biodiversity

Natural England, with Defra, will test and develop updates to the biodiversity metric. Natural England will continue to engage with wider stakeholders and seek external input. Consultation will be required before each major update is published.

3.2 Habitat value, multiplier, and trading rule adjustment

Through future updates, we will aim to ensure that the metric is delivering well for nature's recovery and the metric's users. We will take account of ecological evidence and statutory metric user feedback, and evaluation of wider practice to review:

- habitat-specific values and multipliers
- the roles and relative weighting of different multipliers
- habitat trading rules

We will evaluate how biodiversity net gain is being delivered using proposals for policy level reporting, evaluation, and monitoring set out in pages 80 to 86 of the [consultation on biodiversity net gain regulations and implementation](#). We want to use this information and findings from industry and academia over the next 3 to 5 years to review the metric's formulae and values.

3.3 Species

We think that habitats present the best practical option for the measurement of biodiversity gains and losses. Using habitat as a proxy ensures the metric is easy to use and reflects the fact that habitat loss is the primary driver of biodiversity loss through development. Ecologists should still assess the suitability of habitats on-site to support protected and important species in line with existing policy and legislation.

The metric's habitat distinctiveness scores do consider habitat value for priority species, but individual species are not explicitly accounted for in the metric. Some groups have raised concerns that some species might not benefit from metric outcomes as a result. We are considering whether this could be addressed through changes to the metric or guidance that support habitat enhancement for local priority species and assemblages.

The 3.1 user guide states that other metrics or methods to quantify impacts on individual species can be used alongside the biodiversity metric. Species consideration is also supported in other ways:

- the biodiversity metric can target provision of habitats for species needs identified in species conservation strategies⁴ design codes and Local Nature Recovery Strategies
- encouraging like-for-like replacement of lost habitats so that dependent species do not suffer from long-term depletion of certain habitat types
- wider planning policy and guidance emphasising the importance of recording and surveying species where appropriate

We will keep species considerations within the metric under review. There are two parts of the biodiversity net gain process that could be adapted to consider species-specific issues more explicitly:

- measurement of losses and gains to give a score in units
- the design of habitat interventions that benefit local wildlife populations supported by guidance and strategies outside the metric

Question 7: Do you have any practical suggestions on how we could use species or other ecological data to improve:

- a) the measurement of losses and gains in the metric?
- b) the design of habitat interventions?

- Yes (provide your reasons for this answer)
- No
- Other
- Do not know

3.4 Competency

We want to reduce the burden on local planning authorities verifying biodiversity net gain calculations. To help improve consistency of submitted calculations, we are considering accreditation for metric users. This approach could be similar to the [Building Research Establishment Environmental Assessment Method \(BREEAM\)](#).

An accredited user would have the relevant training, experience, authority, and independence to:

- undertake habitat surveys and condition assessments for use in biodiversity metric calculations
- undertake biodiversity metric calculations

⁴ Natural England may prepare and publish a strategy for improving the conservation status of any species of fauna or flora. ([Environment Act 2021, c.30. Part 6, paragraph 109](#))

- make recommendations for biodiversity gains on-site and off-site

Metric users would not need to be verified for day one of biodiversity net gain becoming mandatory. It would take time to develop and implement a suitable scheme. If supported by this consultation, we would work with professional bodies to establish a realistic timeframe for introducing verification.

We will remain engaged with the Department for Levelling Up, Housing and Communities on what defines a 'competent person' for planning application requirements.

Question 8: Do you think that metric users should be required to attend a verified training course or be accredited before completing the calculation? Explain why and what these should cover.

- Yes, verified training course only
- Yes, accredited only
- Yes, both (training course and accreditation)
- No
- Other
- Do not know

Annex A: Timeline of the biodiversity metric

Work on a biodiversity metric began with a [scoping study](#) in 2009. Habitat distinctiveness and condition were included in the version published for the [biodiversity offset pilots in 2012](#). A timeline from version 1.0 to 3.1, and related consultations is set out below.

Table 3: Timeline of the biodiversity metric

Years	Changes	Consultation (Dates)
2009 to 2013	Development of a metric framework with multipliers.	Offsetting policy (2012) See the biodiversity metric 3.1 user guide for citation and author details.
2014 to 2018	Modified metrics and excel-based tools created (including High Speed 2 (HS2) Limited, Network Rail, and Berkley Homes). Stated the intention to publish a version 2.0 for biodiversity net gain and key features of the update.	Biodiversity net gain: updating planning requirements (December 2018 to February 2019)
2019	Natural England publish biodiversity metric 2.0.	The biodiversity metric 2.0 (July 2019 to February 2020)
2021	Natural England publish biodiversity metric 3.0 and small sites metric.	Biodiversity Metric 3.0 QGIS template and import tool and Small Sites Metric (SSM) Consultation (July 2021 to October 2021)
2022	Natural England publish biodiversity metric 3.1 and an update to the small sites metric	No consultation (April 2022)
2022	Defra to publish the statutory version (including small sites metric)	Technical consultation on the biodiversity metric (August to September 2022)