

Summary of changes from Biodiversity Metric 2.0 to version 3.0

First published July 2021

www.gov.uk/natural-england



Further information

Natural England evidence can be downloaded from our [Access to Evidence Catalogue](#). For more information about Natural England and our work see [Gov.UK](#). For any queries contact the Natural England Enquiry Service on 0300 060 3900 or e-mail enquiries@naturalengland.org.uk .

Copyright

This report is published by Natural England under the Open Government Licence - OGLv3.0 for public sector information. You are encouraged to use, and reuse, information subject to certain conditions. For details of the licence visit [Copyright](#). Natural England photographs are only available for non-commercial purposes. If any other information such as maps or data cannot be used commercially this will be made clear within the report.

ISBN 978-1-78354-795-1

© Natural England and other parties 2021

1. General metric changes

1.1. Connectivity

Responses during the consultation period indicated that the connectivity tool was not often used and that the approach did not work for all habitats. Connectivity has therefore been removed from the calculations for Metric 3.0.

1.2. Accelerated succession

Consultation responses indicated that Accelerated Succession was complex to understand, not widely used and did not provide the solution it set out to resolve. Revisions to the approach used for woodland, in particular changes to the 'Other' woodland categories, meant woodland habitats could be fully integrated into the area habitats without requiring the use of 'accelerated succession'. It was, therefore, dropped from Metric 3.0.

1.3. Advanced creation/enhancement of habitats

New functionality has been introduced which recognises that creating/enhancing habitat in advance reduces the delivery risk associated with such activities and in appropriate circumstances increases the Biodiversity Units generated for a given area. This functionality allows the time to reach target condition multiplier to be reduced proportionally and enables the enhancement difficulty multipliers to be applied once a habitat has been established.

1.4. Delay creation/enhancement of habitats

New functionality has been added to allow for delayed creation/enhancement of habitats and linear features (if needed). This was in response to feedback during the consultation period to recognise the temporal impacts of phased developments.

2. Design

2.1. Colour scheme

The design has been changed to distinguish between the beta test and the latest version, modernise the look and feel and use a colour palette which is more accessible.

2.2. New functionality

- New function to enable users to add illustrations on the start page to indicate which version of a project is being viewed.
- Following analysis of the implications to the formula the tool restricts going down in condition when enhancing by distinctiveness.

2.3. Improved usability

- Restricted dropdown options for habitats and conditions to improve usability in response to the public consultation feedback.

- Re-organising the results and trading summary to consolidate key points and arrange in functional groups.
- Addition of hedgerow and rivers and streams data in the detailed results.

3. Area based metric

3.1. All habitats

- The time to target condition of 32+ years has been changed in name to 30+ for all habitats. The multiplier remains at 0.32.
- A number of changes have been made to the underpinning data in response to public consultation on Biodiversity metric 2.0, frequency analysis¹, testing and advice from Natural England habitat specialists. The time to target condition timescales for some habitats have been refined and the distinctiveness bands and difficulty multipliers applied to some habitats have also changed (see revised tables in Biodiversity metric 3.0 Technical Supplement and/or 'Technical Data' tab in metric 3.0 for details).
- A summary of the main changes in each broad habitat type is given below.

3.2. Heathland and scrub habitats

- *Rhodendron* and *bramble* have been fixed at poor condition and condition assessment not possible/applicable for these habitats.
- The creation and enhancement difficulty risk for hazel scrub has been reduced from medium to low in response to advice from Natural England habitat specialists.
- Sea buckthorn (other) changed to Low distinctiveness and fixed at poor condition in response to advice from Natural England habitat specialists.

3.3. Grassland habitats

- The distinctiveness of bracken has been reduced from medium to low.
- Bracken has been fixed at poor condition and condition assessment not possible/applicable for this habitat.
- The difficulty of enhancement risk for Floodplain Wetland Mosaic (CFGM) reduced from high to medium in response to the frequency analysis testing and advice from Natural England habitat specialists.

¹ Frequency analysis is a function within excel to generate a table of results to compare values using two attributes. The attributes used in this case was habitat type and the range of unit outputs possible with comparable areas or lengths.

- Traditional Orchards moved from Cropland to Grassland broad habitat in response to advice from the Natural England habitat specialists.

3.4. Urban habitats

- 'Suburban/mosaic of developed/natural surface' deleted and replaced with guidance on using a 70/30 split of developed land/gardens to simplify the metric options.
- The following habitats are now all fixed at poor condition: Artificial unvegetated, unsealed surface; Ground level planters; Introduced shrubs; Sandpit quarry or open cast mine; Vegetated garden and Un-vegetated garden. Condition assessment is not possible/applicable for these habitats.
- Amenity Grassland, Urban orchard and Urban woodland habitats have been removed to simplify the metric as they were regarded as duplications of other habitats.
- 'Street tree' has been changed to 'Urban tree' to better reflect the habitat niche covering individual trees, blocks of trees and lines of trees along urban streets.
- Condition assessment now applicable for Urban tree and a new assessment has been developed to allow the full suite of conditions to be used for Urban tree.
- The data attributed to Extensive green roof and Intensive green roof habitats have been switched to correct an error in the labelling of these habitats. Their distinctiveness score is based on UKHab definitions for these habitats.
- The distinctiveness band for allotments has been changed from medium to low in response to the frequency analysis testing.

3.5. Lake habitats

- Lakes - Ponds (Non- Priority Habitat) distinctiveness changed from 'High' to 'Medium' in response to the frequency analysis testing and advice from the Natural England habitat specialists.
- In response to the frequency analysis testing, advice from the Natural England habitat specialists and to better categorise the habitat for the purposes of condition assessments and enhancement opportunities, 'Artificial Lake or pond' has changed to 'Ornamental lake or pond', moved from Urban to Lakes broad habitat and distinctiveness has been reduced to Low.

3.6. Wetland habitats

- Changes to some wetland habitat creation and enhancement timescales in response to the public consultation feedback, and advice from the Environment Agency and Natural England Wetland Specialists (see revised tables in Biodiversity metric 3.0 Technical Supplement and/or 'Technical Data' tab in metric 3.0 for details).

3.7. Woodland & forest habitats

- Other woodland; Young Trees planted has been deleted in response to the public consultation feedback and advice from the Forestry Commission Woodland Specialists.
- The difficulty of creation and enhancement for *Other woodland broadleaved*, *Other coniferous woodland* and *Other woodland mixed* from Medium to Low.
- Reduction in time to target condition for Other woodland broadleaved, other coniferous woodland and Other woodland mixed in response to the Forestry Commission Woodland Specialists advice.
- The distinctiveness of Wood-pasture and Parkland has been increased from High to Very High in response to public consultation and Natural England's specialist advice.
- The time to reach target condition for wet woodland has changed for some condition states (see revised tables in Biodiversity metric 3.0 Technical Supplement and/or 'Technical Data' tab in metric 3.0 for details).

4. Intertidal habitats

4.1. Following the publication of Biodiversity metric 2.0, there has been a wholesale testing and review of the areas of the metric that deal with intertidal habitats. This resulted in sweeping changes being made to elements such as the time it takes those habitats to reach a target condition, the difficulty of creation or restoration of certain habitats, the classification and definition of certain intertidal habitats and also the distinctiveness bands of some of the habitats. All of these changes have been incorporated in metric 3.0. We have also completely revised the condition assessment methodology.

4.2. The new values for all intertidal habitats are contained within metric 3.0 and can be accessed via the 'Technical Data' tab in the calculator tool or from the 'Technical Supplement' document. A more detailed list of the intertidal habitat specific changes between metric 2.0 and 3.0 will be published separately.

4.3. In summary, the changes to the intertidal elements of the metric are:

- Change the offsite risk multiplier categories from Local Planning Authority (LPA) /National Character Area (NCA) to Marine Plan Area to ensure relevance of the location multiplier to the functional marine environment.
- Adjustments to habitat distinctiveness bands.
- Removal of the following intertidal habitats from the metric:
 - Intertidal sediment - Littoral biogenic reefs - on bedrock including chalk, peat or clay
 - Splitting sand and muddy sand into two new habitat categories: littoral sand (medium distinctiveness) and littoral muddy sand (high distinctiveness)

- Artificial features of littoral sediment as not possible to differentiate between 'natural' and artificial
 - Artificial rock habitats that were in metric 2.0 and replaced with 3 artificial 'hard structures' habitats.
- Changes made to the way that technical difficulty of creation is calculated in response to consultation feedback and advice from specialists.
 - Identified natural habitats which cannot be created.
 - Change to the scores for specific habitats in response to consultation feedback and specialist advice. These changes covered the areas listed below – the new scores can be found in the 3.0 Technical Supplement and/or in the 'Technical Data' tab in metric 3.0:
 - Difficulty of creation
 - Difficulty of enhancement
 - Time required to reach target condition
 - Developing scores for new habitats (from splitting up habitats, see above).
 - Reviewed the definitions of artificial intertidal habitats and consolidating these definitions.
 - Confirm trading rules between terrestrial and intertidal habitats to allow for the creation of intertidal habitat on low or medium distinctiveness terrestrial habitat, and facilitate the creation of new areas of saltmarsh as part of managed re-alignment schemes etc.

5. Hedgerows and lines of trees

5.2. The following has changed in response to the frequency analysis of the metric outputs and feedback from the public consultation:

- Reduced the difficulty risk of all hedgerows to Low with a multiplier of 1.
- The distinctiveness bands for hedgerows and lines of trees have been adjusted to differentiate hedgerows with and without trees and a new very high distinctiveness category of hedgerow has been created.
- All hedgerows with trees are a distinctiveness band higher than their non-tree equivalent to reflect the additional value to biodiversity of such hedgerows.
- The score for very low distinctiveness hedgerows has been changed from 0 to 1 to recognise some value of ornamental hedges for wildlife.

6. Rivers and Streams

6.2. The following has changed in response to specialist advice from the Environment Agency and feedback from the public consultation:

- To enable one river classification system to be used Very High distinctiveness river types have been consolidated into one habitat – 'Priority Habitat' and the remaining

river and stream types (excluding Canals) have been consolidated into one habitat type of High distinctiveness – ‘Other Rivers and Streams’.

- Ditches have been moved into the Rivers and Streams metric (from area metric - Lakes) with moderate distinctiveness and a separate (non MoRPh) condition assessment has been created.
- The range of condition scores has been aligned with the area metric (1-3 instead of 1-5).
- Addition of Culverts with Low Distinctiveness and a fixed condition of ‘Poor’ to represent the full range of linear features used for the artificial and natural transport of water.
- Addition of watercourse encroachment to both baseline and post intervention with Moderate and Major distinctions to recognise when structures act as an impediment to natural river morphology and ecological mobility within the watercourse.
- Changed riparian encroachment to Minor, Moderate Major and included in baseline to better reflect the range of real world encroachment into the functional riparian corridor.
- The old in watercourse encroachment multiplier in Biodiversity metric 2.0 of 0.1 has been adjusted and a new multiplier for Major encroachment multiplier of 0.5 used in metric 3.0.
- To enable enhancement by re-alignment where the length is increased as a result of re-meandering, a new functionality in metric 3.0 enables users to enter a greater length of river enhanced than is present on the baseline.