

The watercourse metric: biodiversity training for local planners and ecologists

Frequently Asked Questions August 2023 update

Introduction

This set of questions and answers has been developed by the Environment Agency and is based upon a training event on the watercourse element of the wider Biodiversity Metric for local planning authorities. It sets out the most frequently asked questions from this training event and answers each question as comprehensively as possible.

The training event itself was developed by the Environment Agency specifically for local planners and ecologists and was hosted by the Planning Advisory Service (PAS) across several dates in March 2023, reaching 180 local practitioners. A recording and slides from the event are also available to download on the [PAS website](#).

FAQs

1) Who should review the Watercourses Unit Module of the wider biodiversity metric and at what stage?

It is expected that Local Planning Authorities will review and check the biodiversity metric spreadsheets, including any Watercourses Unit Module calculations. The Environment Agency session: 'The Watercourse Metric, biodiversity training for local planners & ecologists', hosted by PAS in March 2023 ([The watercourse metric, biodiversity training for local planners & ecologists | Local Government Association](#)) is intended to assist ecologists and planners in understanding the Watercourse Unit Module and how to interpret its results. The Environment Agency has created a checklist, which can be accessed via the link above, to assist LPAs review the Watercourses Unit Module. It is advisable that the LPA highlights at pre-app stage whether the developer needs to apply the Watercourse Unit Module of the biodiversity metric as this information will be required to be submitted with a planning application.

The Environment Agency will not be a statutory consultee on Biodiversity Net Gain, and so will not be commenting or responding to Biodiversity Metric calculations on a regular basis.

2) Could BNG apply to applications for ordinary water course consents too? Especially where these sometimes overlap with planning applications

BNG will apply to all applications in scope and government will be producing regulations and guidance on this. In the meantime, as a guide to what's in scope please refer to the Government's response to the 2022 'Consultation on Biodiversity Regulations and Implementation' [Government response and summary of responses – GOV.UK \(www.gov.uk\)](#)

3) When should the Watercourse Unit Module part of the Biodiversity Metric be applied?

The Watercourse Unit Module (previously referred to as the Watercourse Metric and/or Rivers and Streams Metric) is one component of the Biodiversity Metric 4.0. Biodiversity Metric 4.0 proposes that any river, stream or canal that lies within the red line boundary, or where the river, stream or canal is located within 10m of the red line boundary (i.e. the red line boundary intersects the riparian zone) must be included, with 10% BNG delivered. For ditches, the Watercourse Unit Module is applied where the channel is located within 5m of the red line

boundary. The Watercourse Unit Module should only be applied to culverts that lie within the red line boundary.

4) If a development is within 10m of the watercourse/waterbody, it needs to achieve 10% gain through the water metric. Does it need to do any other part of the metric?

Where the Watercourse Unit Module is applied to a development, a 10% uplift in Watercourse Units must be achieved. Watercourse Units cannot be traded across other habitat types. Uplift in Area Habitat Units and Hedgerow Units will need to be achieved separately where these habitats are present.

5) What watercourses should be included in the Watercourse Unit Module?

Any watercourse that is located within the red line boundary must be included in the Net Gain calculations. If the site (red line) boundary crosses into the riparian zone (defined as 10m from each bank top for rivers, streams and canals and 5m from each bank top for ditches), adjacent lengths of watercourse must also be included even if the channel itself is not within the site boundary. Culverts are not classed as having a riparian zone beyond their banks, so the Watercourse Unit Module only needs to be applied to culverts where the channel is within the red line boundary.

The presence of a watercourse is likely to be identified on existing GIS mapping layers but there may be instances where a watercourse is mapped on other mapping systems or even unmapped and only picked up during a site survey. This is particularly likely to be the case for culverts, which aren't necessarily picked up by satellite imaging.

The Watercourse Unit Module is applied to the following features: priority rivers; other rivers and streams; canals; ditches; and, culverted sections of the above.

6) Does the metric only apply to the length of watercourse within or adjacent to the development or should an area that may be affected at either end be included?

The following graphic addresses this question across different scenarios. It is taken from page 41 of [The Biodiversity Metric 4.0 - JP039 \(naturalengland.org.uk\)](https://naturalengland.org.uk)

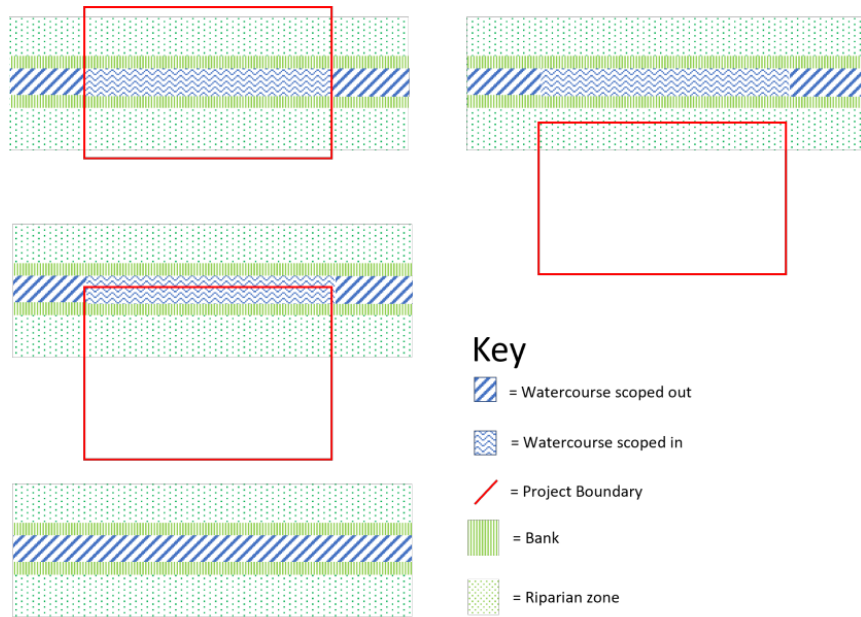


Figure 10-1 Length of watercourse scoped into the net gain calculations

7) You say that water is linear... but what about lakes - for examples the Broads where a river feeds into and out of the water body?

We agree that this scenario could be open to interpretation, but we advise including the lake habitat in the Area Habitat Metric.

8) Are natural springs considered in the metric?

Natural springs are included in the River Condition Assessment under headwaters section.

9) What is the definition of the riparian zone?

The riparian zone for a river, stream or canal is defined as any adjacent land located within 10m of either side of the watercourse (noting that this measurement is taken from bank top). For ditches, the riparian zone is any adjacent land on either side of the channel, within 5m of bank top. Culverts are not classed as having a riparian zone beyond their banks.

The riparian zone is a set area from the bank top of the watercourse, which is the point where there is a break in slope between the river channel and the surrounding land (refer to [The Biodiversity Metric 4.0 - JP039 \(naturalengland.org.uk\)](https://www.naturalengland.org.uk) User Guide).

10) How are overlaps between the riparian zone and Area Habitats addressed in the biodiversity metric?

The riparian zone influences how a river functions (for example, wet woodland may be present in a riparian zone, which inputs woody materials into the river, which shapes how the river works). The riparian zone is therefore included in the River Condition Assessment that is used to inform the Watercourse Unit Module calculations. The habitat within the riparian zone is captured in the Area Habitat metric calculations (in our example, the wet woodland habitat is assessed in its own right). This approach ensures that there is no double-counting and that all habitats are assessed equally.

11) When is a watercourse considered to be strategically significant and how do we check for strategic significance?

Guidance on Strategic Significance is provided in Section 5.4 of the User Guide [The Biodiversity Metric 4.0 - JP039 \(naturalengland.org.uk\)](#).

Strategic significance can be known actions or geographical locations of strategic importance. For watercourses its mainly the former. In the future, Local Nature Recovery Strategies will be the main source of information for this. In the meantime, documents such as River Basin Management Plans, Catchment Plans and Catchment Planning Systems, Shoreline Management Plans, and Estuary Strategies, that identify known restoration actions for watercourses should be referenced.

12) How is encroachment calculated?

Section 10.4 of the User Guide [The Biodiversity Metric 4.0 - JP039 \(naturalengland.org.uk\)](#) provides guidance on riparian zone encroachment including Figure 10-5, which illustrates examples of watercourse encroachment bands for rivers and canals. Section 10.5 of the User Guide provides guidance on watercourse encroachment.

13) Would natural / nature-based solutions, such as willow spiling, count as encroachment?

Nature-based restorative interventions, such as willow spiling, that have been/are introduced to restore the river condition or reinstate natural riverine processes, are not considered to be encroachment.

14) How should we consider outfalls draining from the site to a nearby watercourse?

The Watercourse Unit Module should be completed wherever there is proposed encroachment as defined in the User Guide, including any surface water outfall that is located within 0-4m of bank top.

15) What is the definition of a ditch?

Ditches are defined in the Biodiversity Metric 4.0 User Guide as *“Artificially created linear water-conveyancing features which are less than 5m wide and are likely to retain water for more than 4 months of the year.”* It should only be recorded as a ditch where it does not meet the definition of a higher distinctiveness watercourse.

A ditch should be scoped into Net Gain calculations where the red line boundary includes the ditch or where the red line boundary intersects the riparian zone of the ditch (i.e. 5m from bank top). If onsite assessment indicates that there are no natural processes occurring and that the watercourse meets the definition of a ditch, then evidence for this should be recorded in the baseline survey, along with photos, and used to inform the Net Gain calculations.

Care should be taken when surveying headwaters where streams can be ephemeral. There should also be care when using Main River mapping as drainage ditches can often also be Main River.

A River Condition Assessment is not required for ditches.

16) What is the definition of a canal?

A canal is defined as: “An artificial body of water originally created for the purposes of navigation, whether it is currently navigable or not.” in the [The Biodiversity Metric 4.0 - JP039 \(naturalengland.org.uk\)](#) User Guide (based on the Canal and River Trust’s definition of a canal).

17) Rivers Priority Habitat designation seems very uneven and haphazard. Are the rivers priority habitat maps being updated and will they be added to MAGIC?

Priority River Habitat designation is based on a naturalness assessment. Assessment points can be uploaded to the Cartographer system hosted on the FBA website [Priority Habitats — Freshwater Biological Association \(fba.org.uk\)](#). Natural England appreciates that the maps show ‘best endeavour’ and are not complete. Within the metric user guide we have issued a work around for this:

“Highly naturally functioning stretches of rivers identified on the Priority River Habitat Map, and un-mapped stretches meeting the criteria for inclusion into the Priority River Habitat Map.”
Priority river maps are either found on the FBA website or .gov [Discovering Priority Habitats in England](#)

18) How should headwaters / upstream sections of watercourses that are dry for long periods of time be dealt with? (e.g. chalk streams that dry up)

If they are part of a river system assess as ‘other rivers and streams’ or as ‘Priority River’ habitat. Drying is a natural function of watercourses and should not mean that these sections of a watercourse are excluded or classed as a ditch.

19) Do you anticipate there being a shortage of ecological consultants that are accredited to do the river condition assessment? How is this being addressed?

At present, we are not aware that there is a shortage of surveyors. Training for River Condition Assessment has been happening for 3 years with a consistent uptake from industry.

20) How will the LPA know that the watercourse metric has been completed by an accredited river condition assessor?

Evidence of accreditation should be found in the River Condition Assessment assessor’s comments and/or on the front page of their report. A screen grab showing accreditation by Cartographer Studios Ltd may also be provided or requested.

21) In River Condition Assessment training, we were advised of a Low Risk River Condition Assessment with a default to moderate if development is not in the riparian zone. Can we still use this?

The Low Risk River Condition Assessment was in Biodiversity Metric 2.0 and has now been removed from the metric.

22) Is RCA training the same or does it cross over with MoRPH?

The River Condition Assessment methodology is based on the MoRPh approach.

23) The small site metric can be completed by a competent person, but does that the cover waterbody parts, so assessors do not need to be accredited when undertaking waterbody assessment?

The watercourse habitats included in the Small Sites Metric do not require River Condition Assessment and therefore RCA accreditation is not required in the completion of the Small Sites Metric.

24) Options within the metric are 'retained', 'enhanced' or 'lost' how do you fill out the metric if the river / riparian zone has been degraded by the development?

The channel would be neither enhanced nor retained. The degraded channel would be calculated under the 'created' tab.

25) If there is a loss of river units and no habitat banks selling units, how is permission granted without 10% gain? Can NE Bio Credits be used for river units?

There will be a watercourse specific Statutory Credit that developers can buy. Banking for watercourses is also being developed, with a number of projects funded by the Natural Environment and Investment Readiness Fund looking at this.

26) What are the key changes for watercourses between Biodiversity Metric 3.1 and Biodiversity Metric 4.0?

A 'Summary of Changes' document has been published on Natural England's Biodiversity Metric 4.0 website. For watercourses, the key changes are:

- The watercourse element of the metric is called the Watercourse Unit Module, encompassing canals, ditches and culverts.
- The User Guide is much more succinct and designed as if you are entering information.
- Clearer on trading, i.e. you cannot trade between a ditch and river, river and canal, etc
- Priority river map, if a river is not identified as a Priority River and you could think it should be, then include it as a Priority River.
- The riparian zone encroachment multipliers now look at both banks.
- The riparian encroachment is now applied to ditches (but noting the smaller riparian zone extending to 5m from bank top).
- Biodiversity Metric 4.0 includes the option to use the Watercourses Unit Module for the upper estuary where intertidal habitats are not present.

Further information

For further information on BNG and the work of PAS to support local authorities, please see our [BNG webpages](#) or email pas@local.gov.uk