



## Natural England Biodiversity Metric intermediate level training

14 September 2023





**Natural England Biodiversity Metric Training** 

- We have a lot of people in the 'room' so you are muted and cameras are off
- Questions via Slido
  - Go to slido.com and enter this code: 1112816
  - Scan the QR code
- Please 'like' or thumbs up questions you want to ask, rather than repeating the same question
- We may not get round to all your questions, but will add answers to the event webpage where relevant
- We will be using polls, so please answer these
- This event is being recorded, slides and the recording will be up on our website next week
- Feel free to use the chat to share your experience of using the metric
- Technical issues please post in the chat or email Steve: stephen.barker@local.gov.uk







# Metric 4.0 Intermediate level training and the Metric Checklist

September 2023

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# **Learning Outcomes**

#### After today's training you will:

- Understand the Metric in the context of BNG policy and other related legislation
- Know the rules and principles that underpin the Metric and their ecological context
- Know how to navigate a completed Metric and to check that it is complete and valid
- Understand the scores and multipliers within the Metric and how biodiversity units are calculated
- Understand the outputs of the Metric
- Note: Metric Checklist and Must, Should, Could lists are draft versions



# **Environment Act 2021**

'a turning point for nature' Tony Juniper, Chair of Natural England

- Amends Town & Country Planning Act (TCPA) and 2008 Planning Act (NSIP's)
- Mandates BNG in the planning process, making it a requirement for all appropriate developments to deliver a minimum 10% net gain in biodiversity
- Calculation of net gain by way of a mandatory biodiversity metric and approval of a biodiversity gain plan. Habitat secured for at least 30 years.
- Statutory duty to manage & maintain National Register of net gain delivery sites
- Statutory biodiversity credits



Why do we need Biodiversity Net Gain? Answer: to put nature on the road to recovery

# For years biodiversity has been routinely lost through development

# BNG provides the opportunity to reverse this

# Biodiversity Net Gain will put nature on the road to recovery

#### For the Economy

**For Nature** 

**For People** 



#### BNG provides the most significant opportunity in decades to not only reverse, but to grow nature

# **Biodiversity Net Gain Key points and timeline**

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- BNG will currently apply to England only
- Mandatory BNG is expected to commence for all large scale/major developments in November 2023
- Developments undertaken on small sites will not need to comply with BNG requirements until April 2024. The extension will give Local Planning Authorities (LPA's) and smaller developers a longer window to prepare for BNG on small sites and learn from early experiences of BNG on major sites.
- BNG does not replace or diminish any current protection for biodiversity or processes that are required
   e.g. ecological impact assessment, arboricultural survey, habitats regulations assessment

# Training and Information Autumn 2023



#### **Biodiversity Net Gain policy updates and timeline**

• These will be delivered through the Planning Advisory Service (PAS) and member institutes as webinars by Natural England or Defra, as appropriate

#### **Basic and intermediate training on the Metric and Metric Checklist**

 These will be delivered through the Planning Advisory Service (PAS) and member institutes as webinars by Natural England

#### **Advanced level training on the Metric**

- CIEEM currently offer advanced level training on the Metric and this will continue and likely to increase, especially for LPA ecologists
- Member institutes and other organisations are encouraged to deliver and Natural England will discuss how to support them e.g. training material

# Key BNG Stakeholders

### Developers

Defra land use blog

LPAs

# Landowners

Three very important but different conversations, guidance available online:

- Biodiversity net gain
- Sell biodiversity units as a land manager
- <u>Combining environmental payments</u>
- What counts towards BNG
- Biodiversity net gain for local authorities

- <u>Conservation covenants</u>
- <u>LNRS</u>
- Defra land use blog
- Biodiversity metric
- Price of statutory credits

# What is Biodiversity Net Gain (BNG) and what is the Metric?

- When it comes into force, BNG will be mandated in the planning process, making it a requirement for all appropriate developments to deliver a minimum 10% net gain in biodiversity
- Calculation of net gain will be by way of the statutory biodiversity metric:
- 1. Calculation of the baseline biodiversity unit value of a piece of land prior to planning application
- 2. A second calculation of the post-intervention biodiversity unit value
- 3. Difference between the two calculations is biodiversity gain or loss



Calculating the value of habitats using an Excel workbook



**Metric 4.0** published March 2023 following a decade of development:

Defra pilot Metric 2012, Metric 2.0 2019, Metric 3.0 2021, Metric 3.1 2022

From day one of mandatory biodiversity net gain, all applications that need to submit a Metric must use the Statutory Biodiversity Metric

There will be **NO** transition arrangements with regard to the Metric

# What is a biodiversity unit?

• Biodiversity units are a proxy to describe biodiversity



- Area units
- Hedgerow units
- Watercourse units

BNG applies to each habitat type that is present at the baseline.

For example, a site with 100 area units, 20 hedgerow units and 40 watercourse units will need to provide as a minimum, post-intervention units of:

110 area units, 22 hedgerow units and 44 watercourse units



# **Mechanisms for delivery of BNG**



#### **On-site (units)**

#### **Off-site (units)**

#### Potentially in full or combination



Habitat creation or enhancement; landscaping or green infrastructure



New habitat creation or enhancement on land holdings or via habitat banks

#### Statutory Credits Only if units not available



Landscape-scale strategic habitat creation delivering nature-based solutions

# **The Metric**



#### Developed by Natural England with input from Environment Agency, Forestry Commission and others

- A tool for auditing and accounting for biodiversity losses and gains
- Uses habitat as a 'proxy' measure, translating it into biodiversity units
- All intertidal and terrestrial habitats plus linear habitat types
- Establishes a baseline and forecasts a proposed outcome

Ideally the metric should be used at site selection stage and then iteratively throughout the design process to quantify and evaluate the impacts of different design options, when there is more scope to influence design changes to achieve better ecological outcomes.

#### Metric Checklist for use at planning application validation Updated draft – September 2023

1. Is a Metric required? All major developments from November x, 2023: a. erection of ten or more dwellings or housing development on a site of 0.5 hectare or more b. erection of a building or buildings where the floor space to be created is 1,000m2 or more c. development on a site of 1 hectare or more NB. This checklist is subject to change

- 2. If the development is exempt from BNG a metric is not required to be submitted – self-build, biodiversity gain site, de minimis threshold
- 3. Has the Statutory Biodiversity Metric Calculation Tool been submitted in Excel format (not pdf or other form)? No other versions of the Metric or any other metrics are allowable
- 4. Are sufficient details on start page? date of assessment, assessor.
- 5. Are there any red boxes in the Metric. If not, passes validation.
- 6. If a red box is present, it only passes validation if it is one of the following:
  - a. An outline planning application
  - b. Applicant is requesting permission to purchase statutory biodiversity credits
  - c. Rule 5 of the metric trading rules has been instigated

# **The Metric**

Avoid

Mitigate

Compensate



- Within a decision framework based on mitigation hierarchy
- Provides confidence and consistency of approach
- Aids communication to non-technical audience
- Aids decision making. NOT a decision tool

 NB. Should be completed by a competent person, normally an ecologist.
 Note, where there is a watercourse present, the river condition assessor must have completed river condition assessment training. The Metric

#### Calculation – land measured in hectares (ha).

#### Linear units in kilometres (km).

Baseline calculations – 4 key factors:	<ul> <li>Post-intervention calculation factors:</li> <li>Additionally factors in:</li> <li>Difficulty risk</li> <li>Temporal risk</li> </ul>			
Habitat size	Additionally factors in:			
Habitat condition	<ul> <li>Difficulty risk</li> </ul>			
<ul> <li>Habitat distinctiveness</li> </ul>	<ul> <li>Temporal risk</li> </ul>			
Strategic significance	<ul> <li>Spatial risk</li> </ul>			

The difference between these 2 calculations gives the net change in Biodiversity Units and therefore the overall Biodiversity Net Gain *or* Net Loss



#### 400m athletics track

# **The Metric**

What is a hectare?

• Standard unit for measuring an area equal to 10,000 sq. metres





## **Baseline biodiversity unit**



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## **Post-intervention biodiversity unit**



Area/Length x Distinctiveness x Condition x Strategic Significance

#### Difficulty

Represents the uncertainty in the effectiveness of management techniques used to enhance or create habitat

Postintervention Biodiversity Unit

#### Time to Target Condition

Average time between starting intervention and habitat reaching its target condition

#### Spatial Risk

Only applied to off-site interventions

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Requires user input

Automatically determined by habitat type

## **Metric baseline calculation**





## Metric post-intervention calculation Newly created habitat



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## Metric – calculation of gain or loss







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# Accessing the Metric, associated guidance, condition assessments and FAQ's



#### Access to Evidence

<u>Home</u>

#### The Biodiversity Metric 4.0 (JP039)

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The Biodiversity Metric 4.0 Auditing and accounting for biodiversity Calculation Tool

Open Tool

ISBN: 978-1-7393362-0-2



Metric 4.0 download 'ill stay the same for the statutory metric

## **Download the Metric**

Click to Enable Editing

PROTECTED VIEW Be careful—files from the Internet can contain viruses. Unless you need to edit, it's safer to stay in Protected View.

#### **Click to Enable Content**



Always open on to your laptop or pc. Do not open in a browser.

Enable Editing



# **Associated Guidance/Documents**

**Guidance documents from NE Access to Evidence website** 

- Biodiversity Metric 4.0 documents:
  - User Guide Metric purpose, when and how to use it, rules and principles, how the Metric works
  - **Technical Supplement** how to assess condition; condition assessment sheets; data & considerations that shaped Metric
  - Frequently Asked Questions FAQs about using the Metric
  - Summary of changes between version 3.1 and 4.0
  - Case studies: residential development, port development, river restoration, cabling for offshore wind development and rewilding. More will be added.



The Biodiversity Metric 4.0 User Guide Prepatates Mark 2023 Nature Engand Jack Publisher (2028)

> The Biodiversity Metric 4.0 User Guide - Technical Annex 2 Technical Annex 2 New System Annaly, Filt

## **Open the Metric**

AutoSave 💽		• C= • •	Metric 4.0 Ca	lculation Tool -	macro-enal	bled (3) 🗸 🔰	₽ Sea	rrch (Alt+Q)		Brightma
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A1	- : ×	$\sqrt{f_x}$								

#### Click to Open Tool



This is the view you get when downloading a blank metric from the website. When downloading a completed metric, it may open on any of the pages. Navigate back to the start menu first.



#### The Biodiversity Metric 4.0

Auditing and accounting for biodiversity

#### **Calculation Tool**



ISBN: 978-1-7393362-0-2

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## **Open the Metric – start menu**

The Biodiversity Metric 4.0 - Calculation Tool Start page

	Instructions			
Planning authority:				
Project name:		Training Example		
Applicant:				
Application type:				
Planning application reference:				Main menu
Completed by:				
Date of metric completion:				
Reviewer:				
Version control:				
Consenting body reviewer:				
Date of consenting body review:				Results
Target % net gain:	10%			
Irreplaceable habitat present on-site at baseline:	No			
Total site area (including irreplaceable habitat area):	53.44	Irreplaceable habitat area at baseline:	0.00	

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## Metric – main menu



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# The Metric is also a tool for data visualisation



# Let me demonstrate what I mean

How many blue circles are there? How sure are you of your answer?



Simple right, but imagine if each circle represented a habitat parcel on a huge development and they were different sizes based on area

#### How many number 5's are there? Use 'thumbs up' when you know the answer.

0394869328476538476293729876697934769834785034734768 3486709236083091023546890398639468976938964767830389 2293867209493903498643583769304968398867094626892344 8823748672304726347164987304858876769276118346735663

How sure are you of your answer?

#### Let me help you out

#### How sure are you now of your answer?

0394869328476538476293729876697934769834785034734768 3486709236083091023546890398639468976938964767830389 2293867209493903498643583769304968398867094626892344 8823748672304726347164987304858876769276118346735663

The Metric converts each habitat parcel into biodiversity units and displays the information in a way that is easy to interpret

You can be confident in its output



# **Principles and Rules**

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# **Principles & Rules**



# The Metric is governed by a series of principles and rules

# These must be followed in order to have a valid metric

# **Principle 1 – Existing Protections and Processes**



# The Metric does not override the ecological mitigation hierarchy and other existing requirements/processes

# **Principle 2 – Best Practice**



# The Metric should be used in conjunction with existing professional best practice

# **Principle 3 – Complexity**



# The Metric is not a complex or comprehensive ecological model and is not a substitute for expert ecological advice

# **Principle 4 – Proxy Values**



# Biodiversity units are a proxy for biodiversity and are treated as relative values

# **Principle 5 – Information Tool**



# The Metric is designed to inform decisions in conjunction with locally relevant evidence, expert input, or guidance

## **Principle 6 – Appropriate Interventions**



# Habitat interventions need to be realistic and deliverable within a relevant project timeframe

# **Principle 7 – Local Compensation**

# Created and enhanced habitats should seek, where practical and reasonable, to be local to any impact and deliver strategically important outcomes for nature conservation.

# **Principle 8 – Compensation Size**



# The Metric does not enforce a minimum habitat size ratio for losses and compensation

# In summary...



**Principle 1:** The Metric does not overrule existing protections Principle 2: Existing professional best practice still applies **Principle 3:** The Metric is not a complex ecological model **Principle 4:** The Metric offers a proxy for biodiversity **Principle 5:** The Metric is designed to inform decisions Principle 6: Interventions must be <u>appropriate and realistic</u> **Principle 7:** Compensation should be local and strategic **Principle 8:** There is <u>no minimum</u> habitat size ratio





# Rule 1 – Competency



# Competency requirements must be complied with.

To undertake a River Condition Assessment assessors must be trained and accredited in the River Condition Assessment methodology.

# **Rule 2 – Unique Outputs**



- Biodiversity unit outputs are unique to this metric. The results of other metrics, including previous versions of this metric, are not comparable to those of this metric.
- The three types of biodiversity units generated by this metric (area, hedgerow and watercourse) cannot be summed, traded, or converted between modules.

FINAL RESULTS										
<b>m</b> -t-1t	Habitat units	48.47								
Total net	unit ch	ange	Hedgerow units	0.84						
(Including all on-site & off-site habi	itat retention, c	reation & enhancement)	Watercourse units	0.57						
	0/ 7		Habitat units	10.42%						
'I'otal net	% cha	nge	Hedgerow units	18.98%						
(Including all on-site & off-site habi	itat retention, c	reation & enhancement)	Watercourse units	39.30%						
Trading rul	les sati	isfied?	Ye	s√						
Unit Type	Units Required	Unit Deficit								
Habitat units	10.00%	464.98	511.48	0.00						
Hedgerow units	10.00%	4.43	4.87	0.00						
Watercourse units	10.00%	1.45	1.59	0.00						

# **Rule 3 – Trading Rules**

#### **Determined by distinctiveness**

Distinctiveness Band	Description
Very High	<ul> <li>Examples include:</li> <li>'Wetland - blanket bog'</li> <li>'Grassland – lowland meadows'</li> <li>'Woodland and forest – wood pasture and parkland'</li> </ul>
High	Examples include: • 'Wetland - reedbeds' • 'Grassland – upland calcareous grassland'

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# **Rule 3 – Trading Rules**

#### **Determined by distinctiveness**

Distinctiveness Band	Description
Medium	<ul> <li>'Heathland and shrub – mixed scrub'</li> <li>'Grassland – other neutral grassland', 'Grassland – other lowland acid grassland'</li> </ul>
Low	<ul> <li>'Cropland – cereal crops'</li> <li>'Grassland – modified grassland'</li> </ul>
Very Low	'Urban - sealed surface'

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# **Rule 3 – Trading Rules**



Very high – Not permitted, bespoke compensation for losses

#### High – Same habitat type

Medium – Same broad habitat type or higher distinctiveness

Low – Any habitat of the same or higher distinctiveness

Very low – No trading rules

# Rule 4 – Highest Value Habitats



# Losses of irreplaceable or very high distinctiveness habitat cannot be fully accounted for through the Metric.

# **Rule 5 – Exceptional Circumstances**

- In a small number of situations, changes to the Metric methodology can be permitted
- Only to be used in very rare circumstances and with a substantial evidence burden
- **Does not** override other Metric rules or other ecological good practice
- LPA has to be in agreement with the intervention and compensation
- Examples: decommissioning a reservoir, creation of salt marsh, re-meandering a river





# In summary...



Rule 1: A competent person must undertake the work

Rule 2: <u>Outputs</u> of a Metric are <u>unique</u> cannot be compared

Rule 3: Trading rules must be followed

Rule 4: Losses of highest value habitats <u>cannot be accounted</u> for

**Rule 5:** Only to be used in <u>exceptional circumstances</u> with clear ecological benefit and has to have agreement from LPA



# **Reviewing Metrics**

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### Must

- 1. Follow Natural England metric validation checklist
- 2. If applying Rule 5, you must agree with the proposals
- 3. Check your specific net gain target has been achieved
- 4. If development red line boundary falls within a riparian zone check the watercourse section of the metric has been completed
- 5. Agree bespoke compensation where there is loss or negative impacts on irreplaceable habitat refer to gov.uk guidance
- 6. Check all on-site options have been considered before allowing provision of off-site units
- 7. Give permission to purchase statutory credits as a last resort i.e. when insufficient biodiversity units are available in the market





- 8. Where a metric has been submitted, it must have been completed by someone who is competent
- 9. Check the final metric is fully reflective of the final design
- 10. Check if anything has been submitted that could make the metric invalid
- 11. Check that any works to create or enhance habitat in advance do not pre-date 30<sup>th</sup> January 2020
- 12. Check sites for achieving gains are secured for 30 years
- 13. Ensure proposals comply with wider local plan

## Should

1. Establish and plan for who will need basic level, intermediate and advanced level training on the Metric



- 2. Review any high or very distinctiveness habitats present at baseline and proposed intervention
- 3. Check on-site interventions are appropriate, where high or very high distinctiveness habitats are included
- 4. Check whether protected species or sites are involved
- 5. Consider scale and significance of the project, and its potential risks
- 6. Have an awareness of the local biodiversity unit market e.g. LPA and NCA for area habitats

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9. Complete checks around competence

8. Check that metric and biodiversity gain plan match

- 10. Where an application proposes the purchase of statutory biodiversity credits, the Metric must be fully scrutinised to ensure that it meets all the trading rules
- 11. If intertidal habitats are present, metric must have been completed with particular reference to the user guide

12. If outline permission – check what is being proposed (even if red boxes)

present) and distinctiveness of habitats present at baseline

Should

7. Check appropriate management and monitoring is in place – ask for management and monitoring plan including details of roles and responsibilities



## Should

13. Review provision of on-site units



14. Check the strategic significance multiplier been correctly applied

15. Check where there is any delay in creation that this is acceptable

16. Seek to acquire information about the land on which off-site units will be delivered, where relevant, including proximity to the land included in the application

17. Ensure that the spatial risk multiplier has been correctly applied for all off-site habitat parcels

18. Ensure that legal agreement includes details of off-site interventions



1. Create a system of triage



- Review habitat management and monitoring plan (and compare to assessor comments in metric) – recommend use of Natural England habitat monitoring and management plan template
- 3. Review condition assessment sheets (should be attached to biodiversity gain plan)
- 4. Consider if proposed habitat types and condition are realistic
- 5. Where a river condition assessment is required, check that the assessment was completed by someone with suitable accreditation
- 6. Consider other evidence that may be required





- 7. Check whether proposals link with existing local policies
- 8. Increase knowledge of watercourses within your LPA boundary
- 9. Check if the project been developed in accordance with a recognised standard, such as:
  - BSI Little Book of Biodiversity Net Gain
  - BSI Process for designing and implementing Biodiversity Net Gain
  - Wildlife Trusts Biodiversity Benchmarks
  - <u>CIEEM BNG Good Practice Principles</u>

# The Metric – training example



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### Metric – multipliers make a big difference

Note – only baseline multipliers shown here, but relevant to **both baseline and post**intervention

	Low Stratgic Significance							Medium	Stratgi	c Significance		High Stratgic Significance				
	Area	Distinctiveness	Condition	Strategic Significance	Total Units		Area	Distinctiveness	Condition	Strategic Significance	Total Units	Area	Distinctiveness	Condition	Strategic Significance	Total Units
	10	8	1	1	. 80		10	8	1	1.1	88		10 8	8 1	1.15	92
ji ji	10	6	1	. 1	60		10	6	1	1.1	66		10 6	i 1	1.15	69
Po Po	10	4	1	. 1	40		10	4	1	1.1	. 44		10 4	1	1.15	46
3	10	2	1	1	20		10	2	1	1.1	22		10 2	2 1	1.15	23
	10	0	0	1			10	0	0	1.1	0		10 (	0 0	1.15	0
	Area	Distinctiveness	Condition	Strategic Significance	Total Units		Area	Distinctiveness	Condition	Strategic Significance	Total Units	Area	Distinctiveness	Condition	Strategic Significance	Total Units
o te	10	8	2	1	160		10	8	2	1.1	176		10 8	8 2	1.15	184
iti	10	6	2	1	120		10	6	2	1.1	132		10 6	5 2	1.15	138
	10	4	2	1	. 80		10	4	2	1.1	88		10 4	2	1.15	92
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_	10	0	0	1	. 0		10	0	0	1.1	0		10 (	0	1.15	0
	Area	Distinctiveness	Condition	Strategic Significance	Total Unit		Area	Distinctiveness	Condition	Strategic Significance	Total Units	Area	Distinctiveness	Condition	Strategic Significance	Total Units
. 6	10	8	3	1	40		10	8	3	1.1	264		10 8	3 3	1.15	276
i <u>t</u> i o	10	6	3	1	180		10	6	3	1.1	198		10 6	i 3	1.15	207
9 2	10	4	3	1	120		10	4	3	1.1	132		10 4	3	1.15	138
3	10	2	3	1	. 60		10	2	3	1.1	66		10 2	3	1.15	69
	10	0	0	1	0		10	0	0	1.1	0		10 (	0 0	1.15	0

e.g. high distinctiveness habitat in good condition worth **4.5x** as many units as medium distinctiveness in poor condition

High strategic significance habitats are<br/>worth **1.15x** more units than low strategic<br/>significance – big difference over large areas68

# Key BNG Stakeholders Developers Landowners

Three very important but different conversations, guidance available online:

- Sell biodiversity units as a land manager
- <u>Combining environmental payments</u>
- Biodiversity metric
- What counts towards BNG

- Biodiversity net gain
- Biodiversity net gain for local authorities

LPAs

- <u>Conservation covenants</u>
- LNRS



# **PAS** is here to help



#### For more information:

- <u>https://www.local.gov.uk/pas/topics/environment</u>
- Sign up to the PAS bulletin: <u>https://www.local.gov.uk/pas/our-work/keep-touch</u>
- Join our BNG practitioner network email: pas@local.gov.uk

#### PLEASE LET US KNOW HOW YOU FOUND TODAY VIA THE SLIDO POLLS: Go to slido.com and enter this code: 1112816