# Frequently asked questions:
## Calculating biodiversity net gain

Devon Wildlife Trust

| | |
|---|---|
| **What is 'biodiversity net gain'?** | • it's where the total biodiversity value of habitat 'after development' is more than the total biodiversity value of habitat 'before development'. |
| **Is net gain a legal requirement?** | • The Environment Act 2021 requires a net gain of **at least 10%.**<br>• The National Planning Policy Framework (NPPF) July 2021 states -<br><br>*Planning policies and decisions should contribute to and enhance the natural and local environment by:*<br>*d) minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures* (NPPF 174)<br><br>*When determining planning applications, local planning authorities should apply the following principles:*<br>*d) …….. while opportunities to improve biodiversity in and around developments should be integrated as part of their design, especially where this can secure measurable net gains for biodiversity or enhance public access to nature where this is appropriate.* (NPPF 180) |
| **How is it calculated?** | The government recognises that a legal 'biodiversity net gain' requirement can only work if there is a way in which biodiversity net gain can be calculated. Defra has produced the **Biodiversity Metric 3.0**, a method of measuring the wildlife value of an area based on habitat features. |
| **How does the Biodiversity Metric work?** | For a full explanation, the **Biodiversity Metric User Guide** and **Technical Supplement** should be consulted at –<br>• ***publications.naturalengland.org.uk***<br><br>Selected aspects of the Biodiversity Metric methodology are outlined below, to give a rough indication of what is involved.<br><br>The Biodiversity Metric calculates the biodiversity value of land, in terms of biodiversity units, in 3 broad steps -<br><br><u>1. Pre-intervention (existing state)</u><br>Pre-intervention biodiversity units =<br>**Habitat area** *x* **habitat distinctiveness** *x* **habitat condition** *x* **strategic significance**<br><br><u>2. Post-intervention (forecast state)</u><br>Post-intervention biodiversity units =<br>**(Habitat area** *x* **habitat distinctiveness** x **habitat condition** *x* **strategic significance)** x **(difficulty** *x* **time to target** *x* **spatial risk)**<br><br><u>3. Net gain or net loss</u><br>Net gain or net loss of biodiversity units (BUs) =<br>**Post-intervention BUs** *minus* **pre-intervention BUs**<br><br>Net gain or net loss of biodiversity units (in percentage terms) =<br>**(Net gain or net loss of BUs** *divided by* **pre-intervention BU)** *x* **100** |

| | |
|---|---|
| **What do the various terms mean?** | **Pre-intervention**<br>• the state of habitat prior to the planning application being submitted<br><br>**Post-intervention**<br>• the forecast state of habitat after completion of development works in accordance with the planning permission<br><br>**Biodiversity units**<br>• Biodiversity units are used as an indication of relative biodiversity value<br><br>**Habitat area**<br>• in hectares<br>• Habitat is uses as a proxy for 'biodiversity'<br><br>**Habitat distinctiveness**<br>• the variation of quality **between** habitat types<br>• Distinctiveness bands (very low/low/medium/high/very high) are pre-assigned (in the Technical Supplement) for each type of habitat. Respective scores are 0/2/4/6/8. Scarce or declining habitats get relatively higher scores.<br><br>**Habitat condition**<br>• the variation of ecological condition **within** the habitat type (poor/fairly poor/moderate/fairly good/good)<br>• Respective scores are 1/1.5/2/2.5/3. These scores are allocated according to criteria and guidance set out in the Technical Supplement<br><br>**Strategic significance**<br>• A score based on spatial location of a habitat parcel. It gives additional biodiversity unit value to habitats that have been identified as habitats of strategic importance to that local area.<br><br>**Difficulty of habitat creation/restoration**<br>• The total number of units produced by the Biodiversity Metric calculation is reduced by a 'multiplier' (a number less than 1.0) to reflect the degree of difficulty in creating or restoring the habitat.<br>• The idea is that a habitat which is very difficult to create or restore might only partially materialise. The use of the 'multiplier' means that a larger area of habitat will need to be provided to boost the number of units and make up for this risk.<br><br>**Time to target condition**<br>• The total number of units produced by the Biodiversity Metric calculation is reduced by a 'multiplier' (a number less than 1.0) to reflect the number of years to target condition.<br>• The idea is that a habitat with a long time to target condition will leave a gap of many years when the new growing habitat is not particularly ecologically valuable. The use of the 'multiplier' means that a larger |

| | |
|---|---|
| | area of habitat will need to be provided to boost the number of Units and compensate for this long absence. |
| **How does the Biodiversity Metric deal with off-site compensation?** | • If compensation is to be provided off-site, the pre-intervention (before habitat change) and post-intervention (after habitat change) biodiversity units are calculated for the compensation site.<br>• The pre-intervention units are then subtracted from the post-intervention units to give the resulting net gain or loss in the number of biodiversity units for this compensation site. |
| **How are hedgerows dealt with, by the Biodiversity Metric?** | Hedgerows, and the lines of trees associated with them, are linear habitats and there are separate calculations for them, using a different methodology in the Biodiversity Metric. The nnits involved are called hedgerow biodiversity units.<br><br>1. Pre-intervention (existing state)<br>Pre-intervention hedgerow biodiversity units =<br>**(Hedgerow length *x* hedgerow distinctiveness *x* hedgerow condition) *x* strategic significance**<br><br>2. Post-intervention (forecast state)<br>Post-intervention hedgerow biodiversity units =<br>**(Hedgerow length *x* hedgerow distinctiveness x hedgerow condition) x (difficulty *x* time to target) *x* strategic significance *x* spatial risk**<br><br>3. Net gain or Net loss<br>Net gain or net loss of hedgerow biodiversity units (HBUs) =<br>**Post-intervention HBUs** *minus* **pre-intervention HBUs**<br><br>Net gain or net loss of Hedgerow Biodiversity Units (in percentage terms) =<br>**(Net gain or net loss of HBUs** *divided by* **pre-intervention HBUs)** *x* **100** |
| **What do the various Hedgerow terms mean?** | **Hedgerow Length**<br>• in kilometres<br><br>**Hedgerow distinctiveness**<br>Distinctiveness categories and scores are –<br>High (6)<br>• species-rich hedgerow (with earth bank or ditch)<br>Medium (4)<br>• species-rich hedgerow<br>• native species hedgerow (with earth bank or ditch)<br>• line of trees (ecologically valuable)<br>Low (2)<br>• native species hedgerow<br>• line of trees<br>• non-native/ornamental hedgerow (with earth bank or ditch)<br>Very Low (1)<br>• non-native/ornamental hedgerow |

| | |
|---|---|
| | (A hedgerow is regarded as species-rich where the structural species making up a 30m section of hedgerow includes at least five woody native species).<br><br>**Hedgerow condition**<br>• the extent to which the hedgerow satisfies various minimum criteria for 'favourable condition' status<br>Group A<br>• Height: >1.5m av.<br>• Width: >1.5 av.<br>Group B<br>• Gap at base: < 0.5m<br>• Gap in canopy: none >5m and <10% length<br>Group C<br>• Undisturbed ground: >1m width from outer edge of hedgerow<br>• Undesirable plants: <20% of Undisturbed ground<br>Group D<br>• Invasive: >90% of hedgerow and Undisturbed ground free of invasive species<br>• Damage: > 90% of hedgerow and Undisturbed ground free of human damage<br><br>Condition scores are given as follows –<br>Good (3)<br>• No more than 2 criteria failures (and no more than one in any group)<br>Moderate (2)<br>• No more than 4 criteria failures (and no more than 1 group where it fails both)<br>Poor (1)<br>• More than 4 criteria failures (or fails both criteria in more than 1 group)<br><br>**Strategic significance**<br>• A score based on spatial location of hedgerow. It gives additional biodiversity unit value to hedges that have been identified as habitats of strategic importance to that local area.<br><br>**Difficulty of creation/restoration**<br>• Low (1) multiplier score - for most hedgerow replacement schemes.<br>• Higher multiplier scores - may better reflect the difficulty of recreating certain hedgerows, e.g. a species-rich hedgerow, or hedges associated with tall, steeped-sided banks commonly found in Devon. Expert ecological advice should be obtained where such an exception may apply.<br><br>**Time to target condition**<br>A matrix provides the estimated time to reach a pre-agreed target for a variety of hedgerow habitats. |

| | |
|---|---|
| **How are rivers and streams dealt with, by the Biodiversity Metric?** | Rivers and streams are linear habitats and there are separate calculations for them using a very different methodology in the Biodiversity Metric. The units involved are called river biodiversity units. |
| **Why is caution needed when using the results of the Biodiversity Metric?** | • The Biodiversity Metric is not a total solution to biodiversity/planning decisions. The Biodiversity Metric is a simplification of the real world with habitat used as a proxy for biodiversity and biodiversity units as a theoretical concept. The Biodiversity Metric input and output should be interpreted using ecological expertise and common sense.<br>• Legally protected species, designated sites and irreplaceable habitats (such as ancient woodland) are not dealt with by the Biodiversity Metric and need separate consideration.<br>• The achievement of 'biodiversity net gain' does not necessarily mean that a development meets all requirements of planning policy or legal protection relating to biodiversity/wildlife.<br>• Priority should be given to the 'mitigation hierarchy' when using the results of the metric. This means that steps should be taken to, firstly, avoid likely habitat damage, then minimise and mitigate this damage as much as possible, and then, only as a last resort, compensate for residual damage.<br>• Habitat units, hedgerow units and river units are calculated using different approaches and must be treated separately. They cannot be added together or averaged.<br>• The quality and reliability of the metric's outputs will depend on the quality of the inputs. |